KNOWLEDGE BASE ARTICLE

How to Search Employees by Skills in Employee Directory

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Table of contents

How skills search works 4

Where skills come from 5

Enable skills search 5

Add the Skills column 6

Show skills in the details pane 7

Populate employee skills 7

Search by skills 8

Troubleshooting: the search finds no one by skill 8

Terms 10

The Vitextra Employee Directory web part can find colleagues not only by name, department or job title, but also by what they know. Type "**Power BI**", "SAP" or "contract law" into the search box, and the directory lists the people who have that skill in their **Microsoft 365** profile. This article explains how skills search works, how an administrator turns it on and fills in the data, and what users see when they search.

How skills search works

Employee skills are stored in each person's Microsoft 365 (**SharePoint**) **user profile**, in the **Skills** property. SharePoint search indexes this property, and Employee Directory queries that index whenever someone searches. The exact behavior depends on the **web part** and its data source:

Web part and data source	How skills are searched	Where skill matches appear
Employee Directory, source **Entra ID (Azure AD)**	The search text is sent to SharePoint people search against the **Skills** property; the matching people (up to 45) are then loaded from **Microsoft Graph**.	At the top of the results, before the regular name, title and department matches.
Employee Directory (Entra ID)	Same skills lookup, run shortly after you stop typing. Only people already included in the directory are added, so the filter, exclusions and A–Z navigation still apply.	After the people who match by name and other searchable columns.
Employee Directory, source **User profiles**	The search box queries SharePoint people search directly, and that search already covers the skills in the profile.	Mixed with the other results, ordered by search relevance.

For the two Entra ID–based options, the people found through their skills show the **matched skills first** in the **Skills** column, so it is obvious why each person is in the **list**. For example, a search for "SQL" shows "SQL Server, Power BI, Project management"

rather than burying the matching skill at the end.

How the search text is matched:

- A **single word** is matched as a prefix: "Power" finds "Power BI", "**Power Automate**" and "PowerShell".
- A **phrase** with spaces is matched as an exact phrase: "project management" finds that phrase, not every profile containing "project".
- Search text needs **at least two characters**. Quotation marks and asterisks are ignored.

Note

Skills search runs under the signed-in user's own permissions through the SharePoint Search API. It doesn't need any Microsoft Graph permission beyond the ones the web part already uses.

Where skills come from

All web parts read the same data: the **Skills** user profile property (internal name `SPS-Skills`), which Microsoft Graph exposes as the `skills` property of a user. SharePoint search makes it available as the **Skills managed property**.

The web part does **not** read other "expertise" fields. In particular, **Ask Me About** (`SPS-Responsibility`, shown in the directory as **Responsibilities**), **Interests** and skills stored in other Microsoft 365 services are not part of skills search. If your organization keeps expertise in one of these fields, either move it to **Skills** or add the field as a searchable column - see KB10049. How to Add Custom User Profile Attributes to the Employee Directory Web Part.

Enable skills search

Skills search is turned on by default in new web parts. To check or change it:

1 Edit the page and open the web part properties.
2 In the **Data Source** group, find the **Search by skills** toggle.
3 Set it to **Yes** to add skill matches to the search results, or **No** to search only the regular columns.
4 Republish the page.



The "Search by skills" setting

The toggle is available in both **Employee Directory** and **Employee Directory (Entra ID)**. In the **Employee Directory (Entra ID)** web part, the search box also stays enabled when no column is marked as searchable, as long as **Search by skills** is on.

Warning

The **Search by skills** toggle affects only the Entra ID–based searches. When the **Employee Directory** web part uses the **User profiles** source, the search goes straight to SharePoint people search, which matches skills on its own, so skills are found whether the toggle is on or off.

Add the Skills column

The **Skills** column is hidden by default. Show it so users can see at a glance why a person was found:

1 In the web part properties, under **Columns**, select **Configure**.
2 Find the **Skills** row and select **Show in list**. For the Cards layout, select **Skills** in one of the **Content Fields** dropdowns after saving the column settings.
3 Optionally rename the column in the **Caption** field and change its position.
4 Select **Save**.

Note

With the Entra ID–based options, the **Skills** column is filled for the people found through their skills. For other rows it stays empty, because Microsoft Graph doesn't return skills in directory list queries. The full list of skills for anyone is always available in the details pane. With the **User profiles** source, the column shows skills for every person.

For more about layouts and card fields, see KB10314. Employee Directory Layouts: Details and Cards, Card Size, Card Fields and Group By.

Show skills in the details pane

The details pane can show a person's skills as a set of chips. In the web part properties, open the **Panel** group and make sure the **Skills** toggle is on (it is on by default). For the Entra ID–based options, the pane loads the skills from Microsoft Graph when it opens; for the **User profiles** source, it uses the skills returned by search.

Each skill chip is a link: select it (the tooltip reads **Find people with this skill**) to close the pane and search the directory for everyone with the same skill. With the **User profiles** source, the chip runs a precise `Skills:"<skill>"` query.

See KB10199. Employee Directory: Customizing the Details Pane for the other sections of the pane.

Populate employee skills

Skills search is only as good as the data in the profiles. There are several ways to fill in the **Skills** property.

Users edit their own profile. If your organization allows profile editing, employees can add their skills on their SharePoint profile page (`https://<tenant>-my.sharepoint.com/_layouts/15/editprofile.aspx`). Encourage people to use short, consistent terms ("Power BI" rather than "I know some Power BI").

. Go to **More features** > **User profiles** > **Manage User Profiles**, find the person, select **Edit My Profile** and fill in **Skills**.

. A SharePoint administrator can set skills in bulk, for example from a CSV file:

```
Connect-PnPOnline -Url "https://contoso-
admin.sharepoint.com" -Interactive -ClientId "<your-app-id>"
Set-PnPUserProfileProperty -Account "megan@contoso.com" `
    -PropertyName "SPS-Skills" `
    -Values "Power BI", "SQL Server", "Project management"
```

Microsoft Graph. The `skills` property of a user can be updated with `PATCH /users/{id}` only with **delegated permissions**, that is, by the signed-in user for their own profile. Application-only updates of `skills` are not supported by Microsoft Graph, so use PnP PowerShell for bulk changes.

Warning

New and changed skills become searchable only after SharePoint search re-indexes the user profiles. This usually takes several hours and can take up to a day or longer in large tenants. Until then, the details pane of the Entra ID–based options may already show the new skill while the search doesn't find it yet.

Search by skills

For users, skills search needs no special syntax. Type a skill into the **Search for employees** box:

- Type one word, such as "Python", to find everyone whose skills start with it.
- Type a phrase, such as "data analysis", to find that exact skill.
- Combine the search with quick filters: with **My department** selected, the skill matches are limited to your own department.

People found through their skills are added to the people who match by name, job title, department and other searchable columns. If the **Skills** column is visible, the matching skill is listed first in it.

You can also start a skills search from the details pane: open a colleague's details and select one of their skills to see everyone else who has it.

Troubleshooting: the search finds no one by skill

If a skills search returns no one, or misses people you expect, check the following:

- **The toggle.** For the Entra ID–based options, make sure **Search by skills** is set to **Yes**.
- **The search text.** Use at least two characters. A phrase must match the stored skill exactly; try a single word instead.
- **The profile data.** Open the person's details pane. If the **Skills** section is empty, the person has no skills in the **Skills** property - values in **Ask Me About** or **Interests** are not searched.
- **Indexing delay.** Recently added skills may not be in the **search index** yet. Wait for the next people index update.
- **Search visibility.** The person must be found by SharePoint people search. Profiles hidden from search, or accounts without a user profile, can't be found by skill.
- **Web part scope.** In **Employee Directory (Entra ID)**, only people included by the web part's filter and not excluded can appear. The **My department** quick filter also narrows the skill matches.
- **Many matches.** The **Employee Directory** web part with the Entra ID source adds the

first 45 people found by skill. Refine the search text if the skill is very common.

Tip

To set up the web part from scratch, see KB10309. How to Add and Configure the Employee Directory Web Part. To decide between the two directory web parts, see KB10310. Employee Directory vs. Employee Directory (Entra ID): Which Web Part to Choose.

Terms

Delegated Permissions
Delegated permissions allow an application to act on behalf of a signed-in user. The effective access of the application is the intersection of the permissions granted to the application and the permissions of the user.

List
A list is a storage unit in SharePoint. A list can contain columns of different types, content types, and views. A document library is a special type of list and therefore inherits the functionality of a list.

Managed Property
A managed property in the SharePoint search schema defines what data from crawled properties is included in the search index. Managed properties have a large number of settings that determine how the content is shown in search results. Managed properties can be used in search queries to specify which information to return.

Microsoft 365
Microsoft 365 is a cloud-based subscription service that combines productivity apps such as Word, Excel, PowerPoint, and Outlook with cloud services such as SharePoint, OneDrive, Teams, and Exchange Online, together with advanced security and device management.

Microsoft Graph
Microsoft Graph is a REST API secured with Microsoft Entra ID (formerly Azure Active Directory) and OAuth 2.0. It provides a single endpoint for accessing data and services in Microsoft 365, such as SharePoint, Outlook, OneDrive, Teams, and others.

Power Automate
Microsoft Power Automate is a cloud-based service that allows users to create automated workflows between applications and services. It enables the automation of repetitive tasks and processes, such as data collection, notifications, and approvals, without the need for extensive coding knowledge.

Power BI
Microsoft Power BI is a business analytics tool that enables users to visualize data

and share insights across their organization or embed them in an app or website. It allows users to connect to various data sources, transform raw data into interactive dashboards and reports, and analyze data using intuitive drag-and-drop features.

Search Index
The search index is the store of content and metadata that the crawler has processed and that search queries run against. Only properties that are mapped to managed properties are included in the index.

SharePoint
SharePoint is a web-based collaboration platform that provides content management, document management, workflow applications, search, and other tools that empower employees and teams to work together. SharePoint is also a secure place to store, organize, and access shared information.

User Profile
A user profile is a set of properties that describe a user. The properties include basic information about the user, contact details, and other data. The user profile is used by services such as Delve, My Site, and others.

Web Part
A web part is a primary building block of functionality or content placed on a SharePoint page. Some web parts support customization, such as configuring the web part or changing its appearance.