

Building your first Power Query connector for Microsoft Fabric



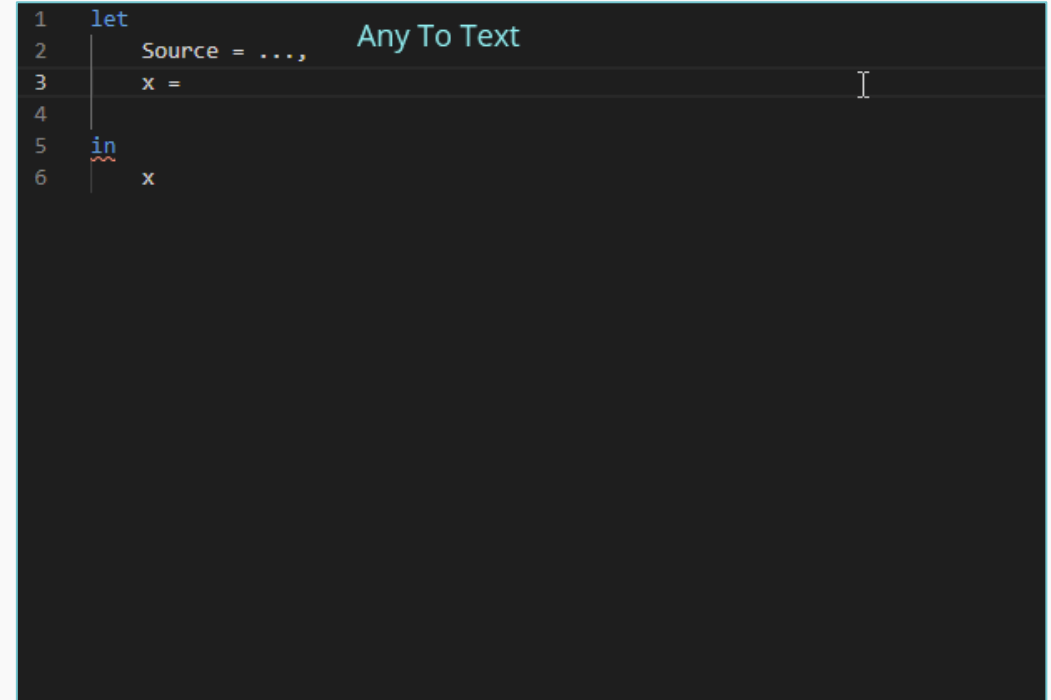
Getting
started

Power Query Connector SDK for VS Code

General Availability

Provides a service for the Power Query / M formula language and building connectors with the following capabilities:

- **Fuzzy autocomplete**
Suggests keywords, local variables, and the standard Power Query library
- **On-hover info**
- **Function hints**
- **Code formatting**
- **Run test queries**
- **View query results**
- **Build connector file (.mez)**

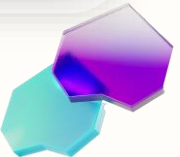


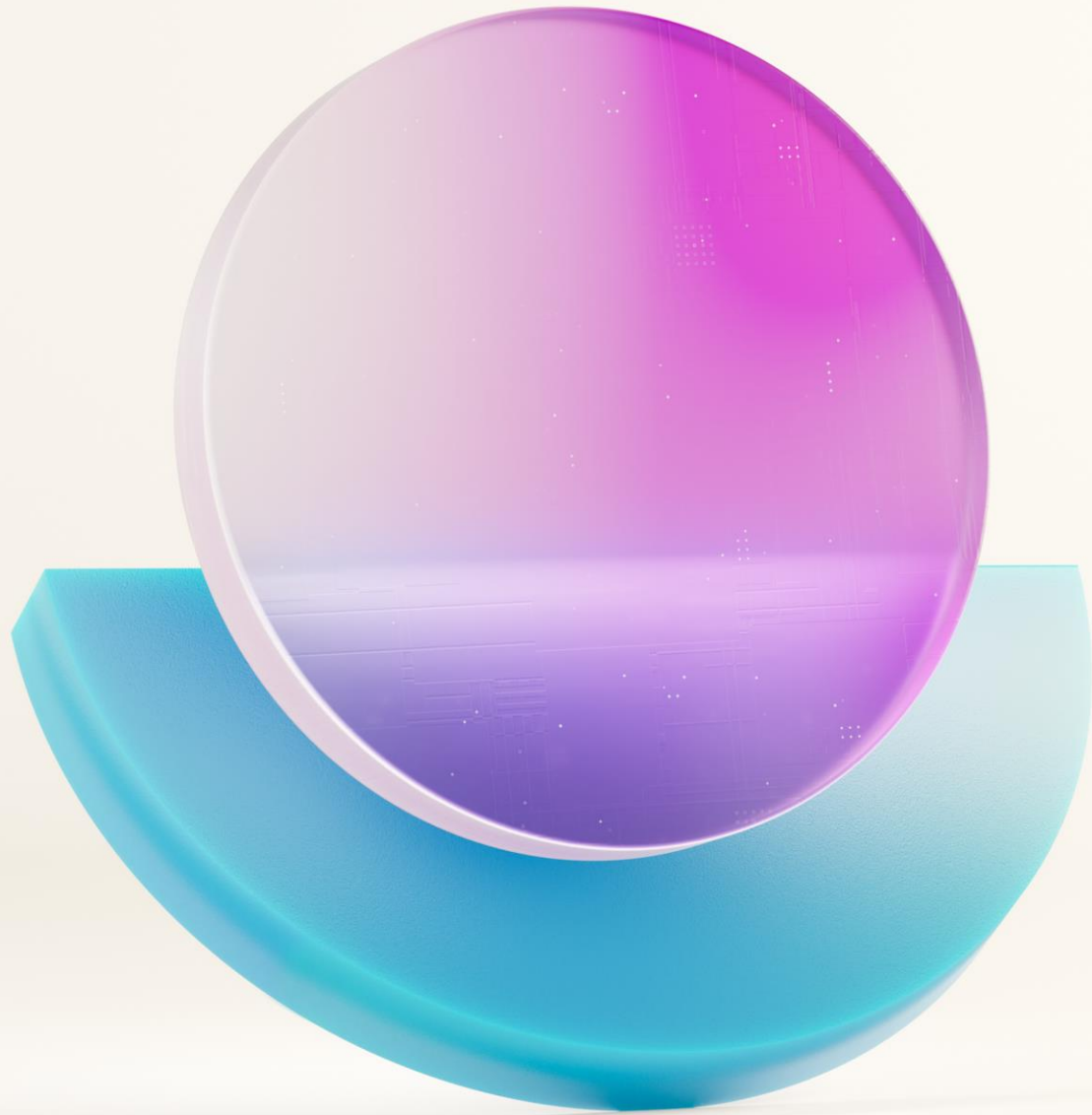
The screenshot shows a dark-themed VS Code editor with a Power Query / M script. The code is as follows:

```
1 let
2     Source = ..., Any To Text
3     x =
4
5 in
6     x
```

Line 2 shows a variable 'Source' assigned to '...', with a tooltip 'Any To Text' visible. Line 3 shows 'x =' with a fuzzy autocomplete list on the right side of the editor. Line 5 shows the 'in' keyword with a wavy underline. Line 6 shows the variable 'x'.

<https://aka.ms/PowerQuerySDK>





Hello,
World

Connector development process

Create an extension project

- Connector definition file (<connectorName>.pq)
- A query file (<connectorName>.query.pq)
- A string resource file (resources.resx)
- PNG files of various sizes used to create icons

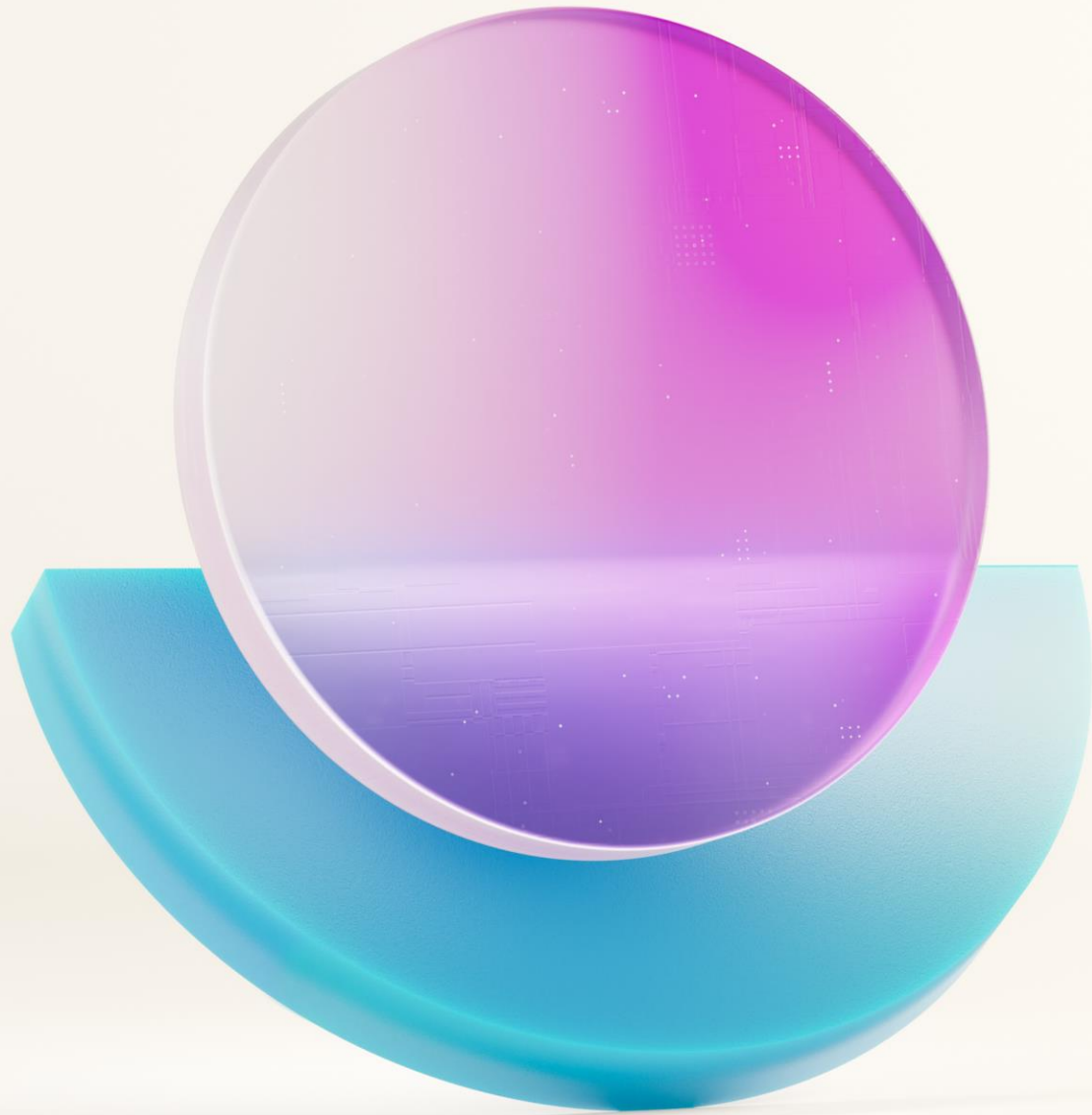
Testing

- Set and store credentials for your data source in the project settings, so that you can test your extension without having to enter them every time
- Use the query file (<connectorName>.query.pq) to run test queries. The query evaluation will automatically include your extension code, allowing you to call or test any shared functions in your extension code

Build and deploy

- The build command will create a .mez file in the output folder, and the deploy command will copy the .mez file to the Extensions folder in your Power Query installation





What's in a
connector?

Connector development process

Authentication

- Anonymous
- Oauth
- Aad (Entra ID)
- UsernamePassword
- Windows
- Key

Navigation

- (none)
- Flat navigation table
- Multi-level navigation

Definition

- Schemas and types
- Transformations



Authentication

Authentication Kind	Field	Description
Anonymous		The Anonymous (also called Implicit) authentication kind doesn't have any fields.
OAuth	StartLogin	Function that provides the URL and state information for starting an OAuth flow.
		Go to the Implementing an OAuth Flow section.
	FinishLogin	Function that extracts the access_token and other properties related to the OAuth flow.
	Refresh	(optional) Function that retrieves a new access token from a refresh token.
	Logout	(optional) Function that invalidates the user's current access token.
Aad	Label	(optional) A text value that allows you to override the default label for this AuthenticationKind.
	AuthorizationUri	text value or unary function that returns the Microsoft Entra ID authorization endpoint (example: "https://login.microsoftonline.com/common/oauth2/authorize").
		Go to the Microsoft Entra ID authentication section.
	Resource	text value or unary function that returns the Microsoft Entra ID resource value for your service.
UsernamePassword	Scope	(optional) text value or unary function that returns the list of scope(s) to request as part of the authentication flow. Multiple scope values should be separated by a space. The scope value should be the scope name, without an Application ID URI (example: Data.Read). When not provided, the user_impersonation scope is requested.
	UsernameLabel	(optional) A text value to replace the default label for the Username text box on the credentials UI.
	PasswordLabel	(optional) A text value to replace the default label for the Password text box on the credentials UI.
Windows	Label	(optional) A text value that allows you to override the default label for this AuthenticationKind.
	UsernameLabel	(optional) A text value to replace the default label for the Username text box on the credentials UI.
	PasswordLabel	(optional) A text value to replace the default label for the Password text box on the credentials UI.
Key	Label	(optional) A text value that allows you to override the default label for this AuthenticationKind.
	KeyLabel	(optional) A text value to replace the default label for the API Key text box on the credentials UI.
	Label	(optional) A text value that allows you to override the default label for this AuthenticationKind.

Navigation

Flat

Multi-level

Navigator

Display Options

NavTable Simple [4]

☐ Item1

☐ Item2

☒ Item3

☐ MyFunction

Navigator

Display Options

NavTable Nested [3]

Nested A

☒ Item1

☐ Item2

Nested B [2]

☒ Item1

☐ Item2

Nested C [2]

☐ Item1

☐ Item2

A decorative graphic consisting of two 3D geometric shapes. One is a blue rectangular prism with a slanted top, and the other is a purple rectangular prism with a slanted top, positioned slightly behind and to the left of the blue one. They are rendered with soft shadows.

20 Microsoft Fabric

Power Query Connector Certification

Data source owners who develop a custom connector for their data source might want to distribute their custom connector more broadly to Power Query users. Certifying a Power Query custom connector makes the connector available publicly, out-of-box, within Power BI semantic models (Power BI Desktop and Power BI service), Power BI dataflows, and certified connectors are supported in PowerBI.com and all versions of Premium.

Certified connectors are:

- Maintained by the partner developer
- Supported by the partner developer
- Certified by Microsoft
- Distributed by Microsoft

We work with partners to try to make sure that they have support in maintenance, but customer issues with the connector itself will be directed to the partner developer.

Learn more: <https://aka.ms/pqconnectorcertification>



Thank you!