

# Contents

[Get started with Power BI - documentation](#)

[Overview](#)

[What is Power BI?](#)

[What is Power BI Desktop?](#)

[What is the Power BI service?](#)

[Comparing Power BI Desktop and the service](#)

[Tutorials](#)

[Get started with Power BI Desktop](#)

[Get started with the Power BI service](#)

[Concepts](#)

[What's new in the latest Power BI update?](#)

[The new experience in the Power BI service](#)

[Understand the Power BI service](#)

[Ten tips for getting help](#)

[Licensing](#)

[What is self-service sign-up and self-service purchase?](#)

[Sign up or purchase Power BI](#)

[Features by license type](#)

[Get help purchasing Power BI Pro](#)

[Get help signing up for Power BI](#)

[Security](#)

[Security baseline](#)

[How-to guides](#)

[Get Power BI Desktop](#)

[Reference](#)

[Supported languages and countries/regions](#)

[Supported browsers](#)

[Resources](#)

[Videos](#)

[Webinars](#)

[Power BI updates archive](#)

[Power BI Desktop change log](#)

[Power BI Desktop Send a Smile Privacy Statement](#)

[Power BI Desktop diagnostics](#)



# What is Power BI?

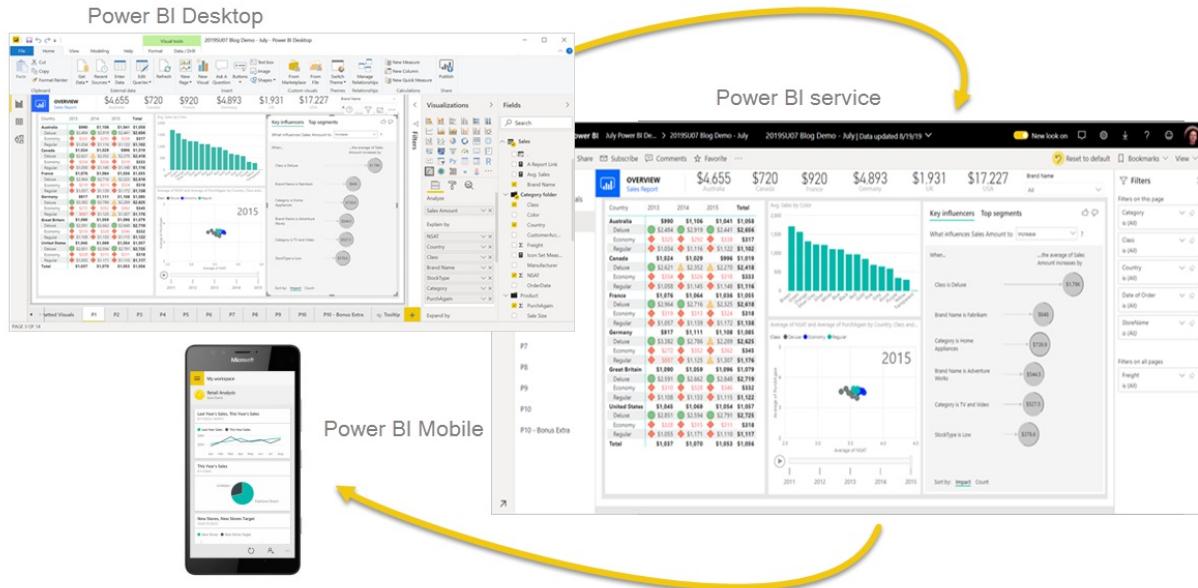
12/15/2022 • 4 minutes to read • [Edit Online](#)

Power BI is a collection of software services, apps, and connectors that work together to turn your unrelated sources of data into coherent, visually immersive, and interactive insights. Your data may be an Excel spreadsheet, or a collection of cloud-based and on-premises hybrid data warehouses. Power BI lets you easily connect to your data sources, visualize and discover what's important, and share that with anyone or everyone you want.

## The parts of Power BI

Power BI consists of several elements that all work together, starting with these three basics:

- A Windows desktop application called **Power BI Desktop**.
- An online SaaS (*Software as a Service*) service called the **Power BI service**.
- Power BI mobile apps for Windows, iOS, and Android devices.



These three elements—Power BI Desktop, the service, and the mobile apps—are designed to let you create, share, and consume business insights in the way that serves you and your role most effectively.

Beyond those three, Power BI also features two other elements:

- **Power BI Report Builder**, for creating paginated reports to share in the Power BI service. Read more about [paginated reports](#) later in this article.
- **Power BI Report Server**, an on-premises report server where you can publish your Power BI reports, after creating them in Power BI Desktop. Read more about [Power BI Report Server](#) later in this article.

## How Power BI matches your role

How you use Power BI may depend on your role in a project or on a team. Other people, in other roles, might use Power BI differently.

For example, you might primarily use the **Power BI service** to view reports and dashboards. Your number-crunching, business-report-creating coworker might make extensive use of **Power BI Desktop** or **Power BI**

**Report Builder** to create reports, then publish those reports to the Power BI service, where you view them. Another coworker, in sales, might mainly use the **Power BI phone app** to monitor progress on sales quotas, and to drill into new sales lead details.

If you're a developer, you might use Power BI APIs to push data into datasets or to embed dashboards and reports into your own custom applications. Have an idea for a new visual? Build it yourself and share it with others.

You also might use each element of Power BI at different times, depending on what you're trying to achieve or your role for a given project.

How you use Power BI can be based on which feature or service of Power BI is the best tool for your situation. For example, you can use Power BI Desktop to create reports for your own team about customer engagement statistics and you can view inventory and manufacturing progress in a real-time dashboard in the Power BI service. You can create a paginated report of mailable invoices, based on a Power BI dataset. Each part of Power BI is available to you, which is why it's so flexible and compelling.

Explore documents that pertain to your role:

- Power BI for [\*business users\*](#)
- Power BI Desktop for [\*report creators\*](#)
- Power BI Report Builder for [\*enterprise report creators\*](#)
- Power BI for [\*administrators\*](#)
- Power BI for [\*developers\*](#)
  - [What is Power BI embedded analytics?](#)
  - [Create your own visuals in Power BI](#)
  - [What can developers do with the Power BI API?](#)

## The flow of work in Power BI

One common workflow in Power BI begins by connecting to data sources in Power BI Desktop and building a report. You then publish that report from Power BI Desktop to the Power BI service, and share it so business users in the Power BI service and on mobile devices can view and interact with the report.

This workflow is common, and shows how the three main Power BI elements complement one another.

Here's a detailed [comparison of Power BI Desktop and the Power BI service](#).

### Use the deployment pipeline tool

In the Power BI service, you can use the [deployment pipeline tool](#) to test your content before you release it to your users. The deployment pipeline tool can help you deploy reports, dashboards, datasets, and paginated reports. Read about how to [get started with deployment pipelines](#) in the Power BI service.

## Paginated reports in the Power BI service

Another workflow involves paginated reports in the Power BI service. Enterprise report creators design paginated reports to be printed or shared. They can also share these reports in the Power BI service. They're called *paginated* because they're formatted to fit well on a page. They're often used for operational reports, or for printing forms such as invoices or transcripts. They display all the data in a table, even if the table spans multiple pages. Power BI Report Builder is the standalone tool for authoring paginated reports.

**Invoice CIV-000676 000007-1**

**30 November 2019**

Payment terms: Net 45 days  
Payment due 1/14/2020

**\$308,763.00**

ITEM	DESCRIPTION	QUANTITY	SALES PRICE	DISCOUNT	AMOUNT	
D011	Lens	2	Each	2	0	4.00
L0001	Mid-Range Speaker	35	Each	500	0	17,500.00
P0001	Acoustic Foam Panel	117	Each	37	0	4,329.00
D0003	Standard Speaker	23	Each	220	0	5,060.00
T0001	Speaker cable 10	65	Each	500	0	32,500.00
D0004	High End Speaker	12	Each	2000	0	24,000.00
T0004	Television M120 37" Silver	53	Each	350	0	18,550.00
T0002	Projector Television	23	Each	3750	0	86,250.00
T0005	Television HDTV X590 52" White	33	Each	2890	0	95,370.00
T0003	Surround Sound Receiver	56	Each	450	0	25,200.00

SALES SUBTOTAL AMOUNT **4.00**

SALES TAX **12,350.52**

**USD TOTAL** **321,113.52**

Sales invoice notes

**METHODS OF PAYMENT**

Electronic payment	Check
Payment reference <b>US-009</b>	Make check payable to <b>Microsoft</b> .
Sort code	Write reference <b>US-009</b> on reverse of check.
Account No. <b>34567</b>	

**OTHER INFORMATION**

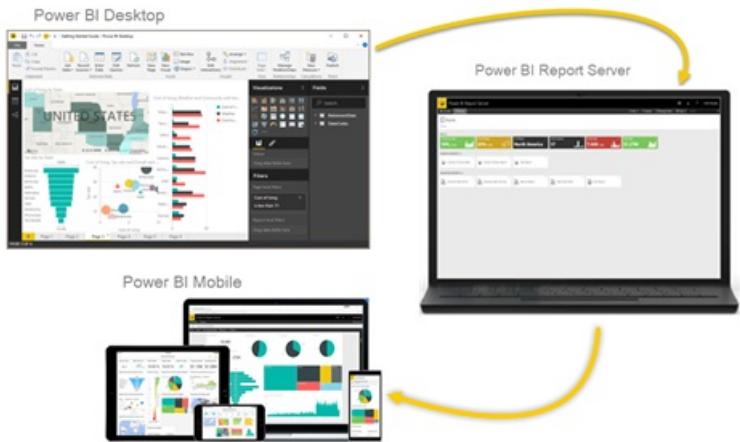
Tax registration no. <b>1234123400</b>
Our reference <b>Karl Bystrom</b>

Read more about [paginated reports](#) in the Power BI service.

## On-premises reporting with Power BI Report Server

What if you need to keep your reports on premises, say, behind a firewall? Read on.

You can create, deploy, and manage Power BI reports in Power BI Desktop, and paginated reports in Report Builder, with the ready-to-use tools and services that Power BI Report Server provides.



Power BI Report Server is a solution that you deploy behind your firewall and then deliver your reports to the right users in different ways, whether that's viewing them in a web browser, on a mobile device, or as an email. And because Power BI Report Server is compatible with Power BI in the cloud, you can move to the cloud when you're ready.

Read more about [Power BI Report Server](#).

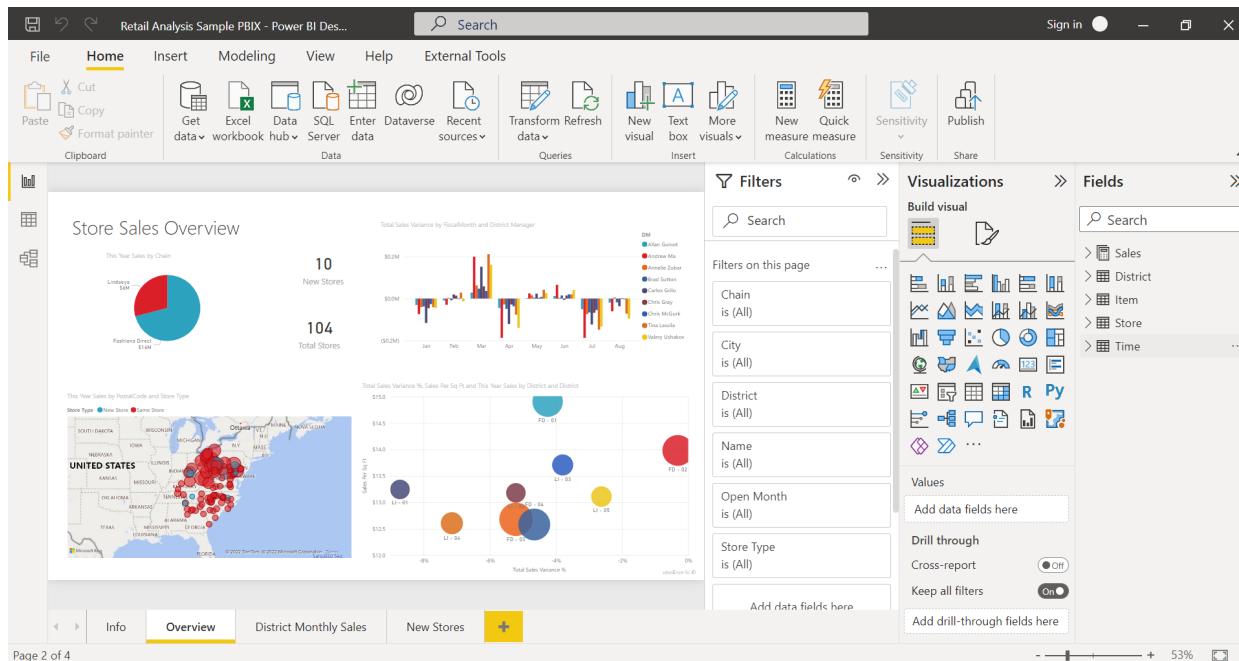
## Next steps

- [Quickstart: Learn your way around the Power BI service](#)
- [Tutorial: Get started with the Power BI service](#)
- [Quickstart: Connect to data in Power BI Desktop](#)

# What is Power BI Desktop?

12/15/2022 • 5 minutes to read • [Edit Online](#)

*Power BI Desktop* is a free application you install on your local computer that lets you connect to, transform, and visualize your data. With Power BI Desktop, you can connect to multiple different sources of data, and combine them (often called *modeling*) into a data model. This data model lets you build visuals, and collections of visuals you can share as reports, with other people inside your organization. Most users who work on business intelligence projects use Power BI Desktop to create reports, and then use the *Power BI service* to share their reports with others.



The most common uses for Power BI Desktop are as follows:

- Connect to data.
- Transform and clean data to create a data model.
- Create visuals, such as charts or graphs, that provide visual representations of the data.
- Create reports that are collections of visuals on one or more report pages.
- Share reports with others by using the Power BI service.

People most often responsible for such tasks are often considered *data analysts* (sometimes referred to as *analysts*) or business intelligence professionals (often referred to as *report creators*). However, many people who don't consider themselves an analyst or a report creator use Power BI Desktop to create compelling reports, or to pull data from various sources and build data models, which they can share with their coworkers and organizations.

## IMPORTANT

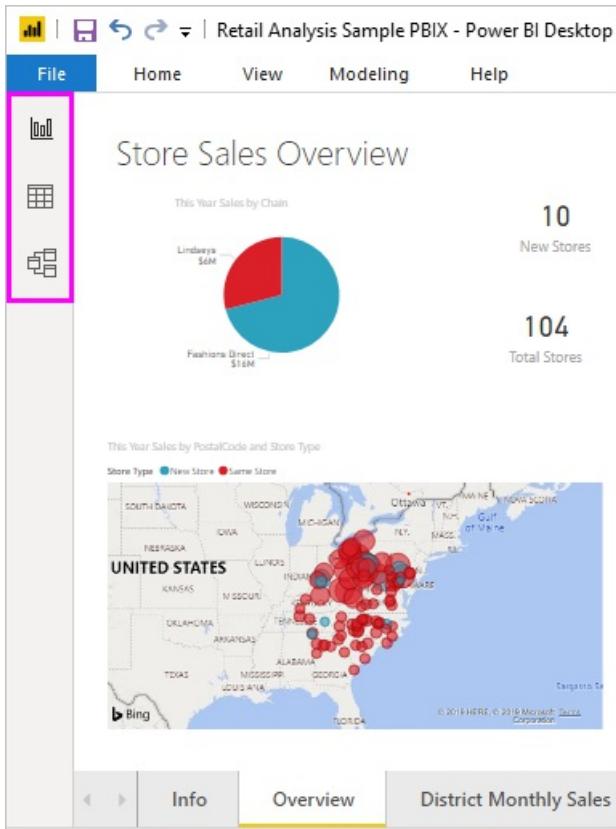
Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

There are three views available in Power BI Desktop, which you select on the left side of the canvas. The views,

shown in the order they appear, are as follows:

- **Report:** You create reports and visuals, where most of your creation time is spent.
- **Data:** You see the tables, measures, and other data used in the data model associated with your report, and transform the data for best use in the report's model.
- **Model:** You see and manage the relationships among tables in your data model.

The following image shows the three views, as displayed along the left side of the canvas:



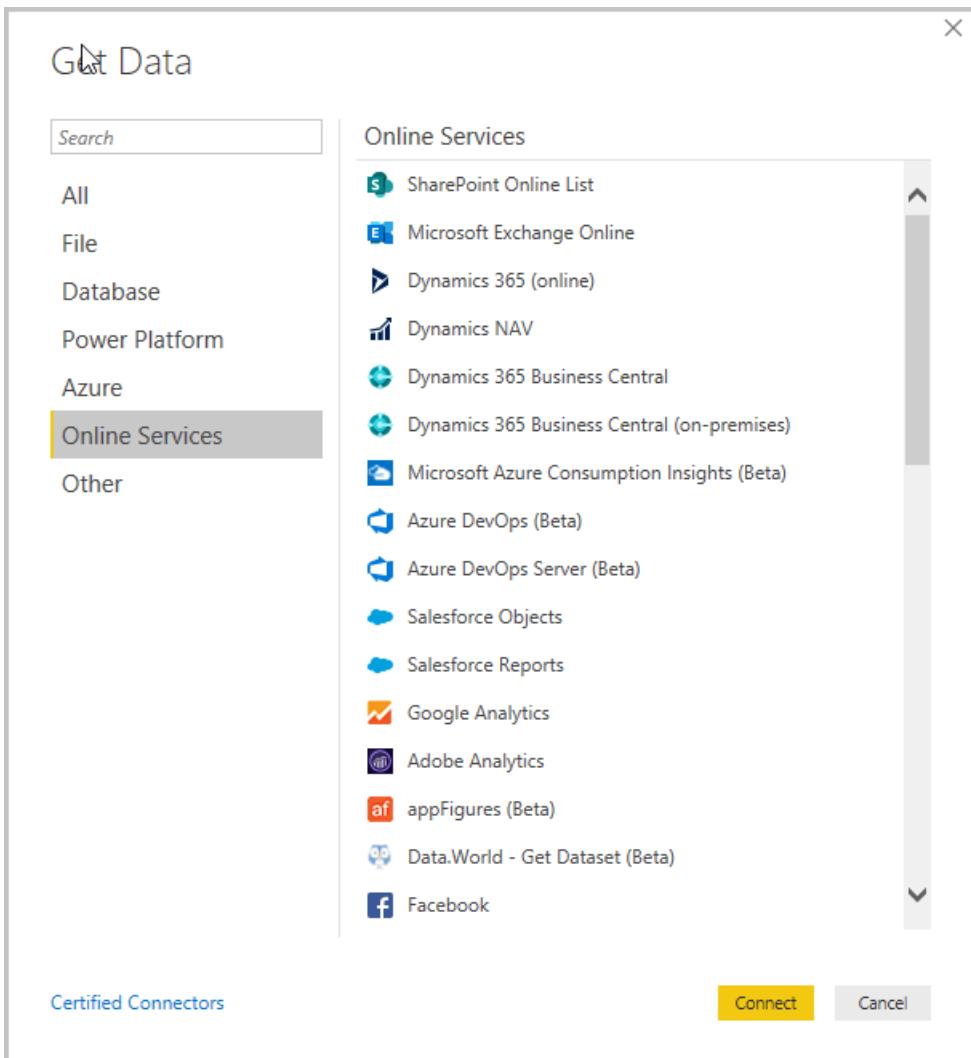
## Connect to data

To get started with Power BI Desktop, the first step is to connect to data. There are many different data sources you can connect to from Power BI Desktop.

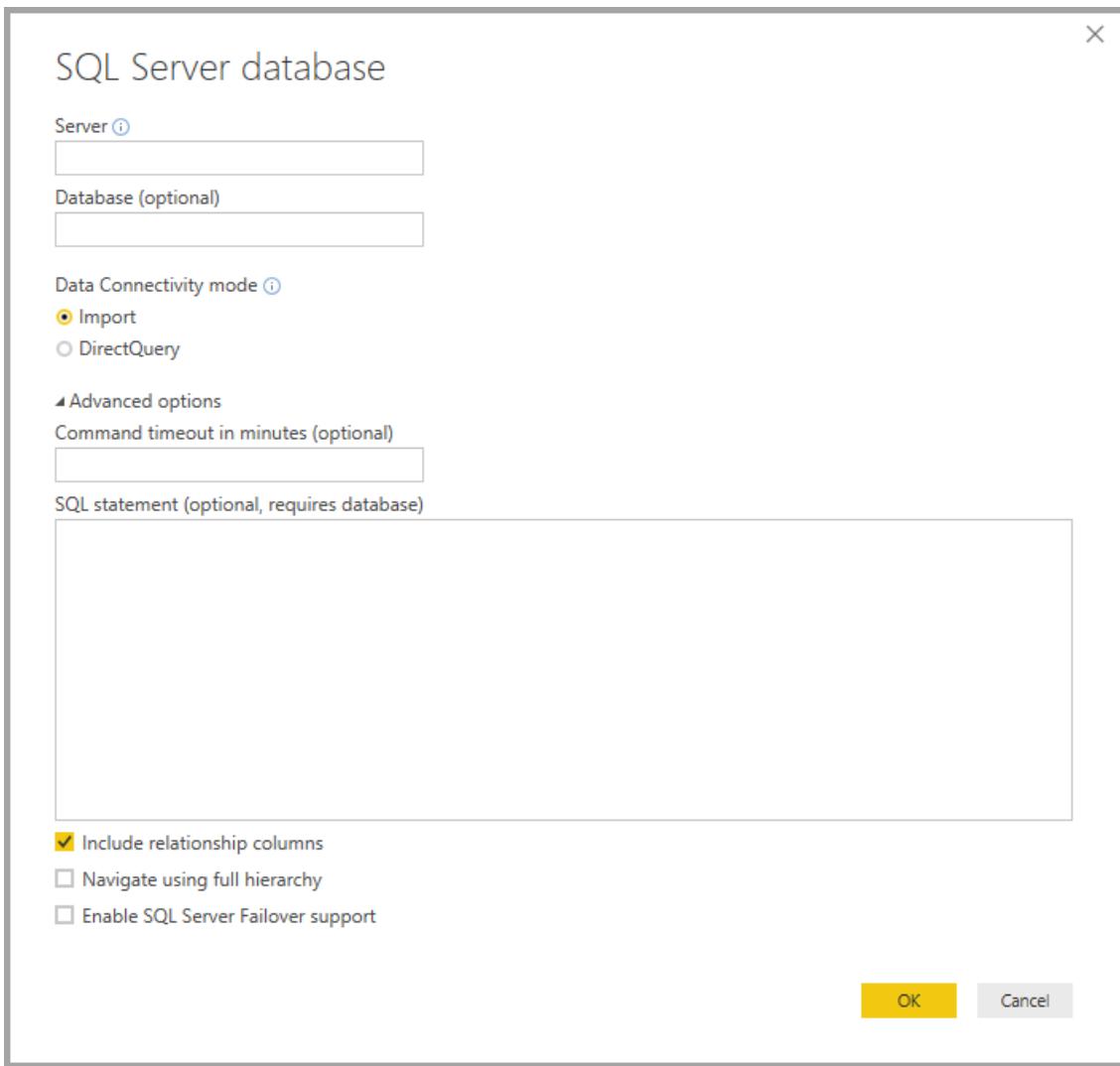
To connect to data:

1. From the **Home** ribbon, select **Get Data > More**.

The **Get Data** window appears, showing the many categories to which Power BI Desktop can connect.



- When you select a data type, you're prompted for information, such as the URL and credentials, necessary for Power BI Desktop to connect to the data source on your behalf.



3. After you connect to one or more data sources, you may want to transform the data so it's useful for you.

## Transform and clean data, create a model

In Power BI Desktop, you can clean and transform data using the built-in [Power Query Editor](#). With Power Query Editor, you make changes to your data, such as changing a data type, removing columns, or combining data from multiple sources. It's like sculpting: you start with a large block of clay (or data), then shave off pieces or add others as needed, until the shape of the data is how you want it.

To start Power Query Editor:

- On the **Home** ribbon, in the **Queries** section, select **Transform data**.

The **Power Query Editor** window appears.

The screenshot shows the Microsoft Power Query Editor interface. The ribbon at the top includes File, Home, Transform, Add Column, View, Tools, and Help. The Home tab is selected. On the left, there's a 'Queries [1]' pane with a single item: 'Ranking of best and worst states for retire...'. The main area displays a table with five columns: Column1, Column2, Column3, Column4, and Column5. The table contains 52 rows of data, mostly from Bankrate's 2019 report, with some rows being merged. The columns represent various metrics for US states. The 'Transform' ribbon tab is also visible, showing options like Sort, Split Column, Group, and Replace Values.

Column1	Column2	Column3	Column4	Column5
State	Overall rank	Affordability	Crime	Culture
Source: Bankrate's 2019 "Bes...				
Nebraska	1	14	19	21
Iowa	2	8	15	20
Missouri	3	1	42	33
South Dakota	4	17	23	12
Florida	5	25	29	13
Kentucky	6	9	9	46
Kansas	7	7	39	37
North Carolina	7	13	28	28
Montana	9	16	31	2
Hawaii	10	45	24	9
Arkansas	11	4	46	39
Wisconsin	12	20	15	17
North Dakota	13	22	17	26
	16			

Each step you take in transforming data (such as renaming a table, transforming a data type, or deleting a column) is recorded by Power Query Editor. Every time this query connects to the data source, those steps are carried out so that the data is always shaped the way you specify.

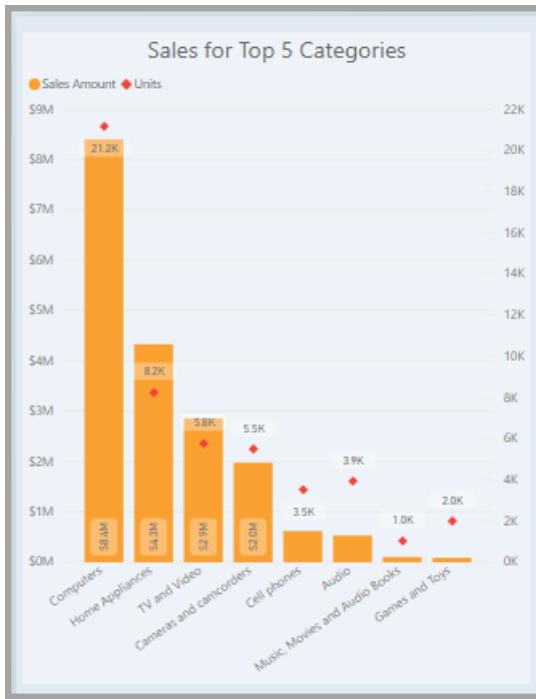
The following image shows the **Power Query Editor** window for a query that has been shaped, and turned into a model.

The screenshot shows the Microsoft Power Query Editor interface. The ribbon menu includes File, Home, Transform, Add Column, View, Tools, and Help. The Home tab is selected. The ribbon also features sections for Close & Apply, New Source, Recent Sources, Enter Data, Data source settings, Manage Parameters, Refresh Preview, Advanced Editor, Properties, Manage, and Query. On the right side, there are buttons for Manage Columns, Reduce Rows, Sort, Split Column, Group By, and Replace Values under the Transform section. A Data Type dropdown is set to Whole Number. The AI Insights pane on the right shows options like Text Analytics, Vision, Azure Machine Learning, and AI Insights. The main area displays a table titled "Best states for sunglasses" with columns: State, Overall rank, Affordability, and Weather. The table contains 20 rows of data. To the right of the table is a "Query Settings" pane with sections for Properties (Name: Best states for sunglass sales) and Applied Steps (listing various transformation steps). The bottom status bar indicates "4 COLUMNS, 40 ROWS" and "Column profiling based on top 1000 rows".

Once your data is how you want it, you can create visuals.

# Create visuals

After you have a data model, you can drag *fields* onto the report canvas to create *visuals*. A visual is a graphic representation of the data in your model. There are many different types of visuals to choose from in Power BI Desktop. The following visual shows a simple column chart.



To create or change a visual:

- From the **Visualizations** pane, select the **Build visual** icon.



If you already have a visual selected on the report canvas, the selected visual changes to the type you selected.

If no visual is selected on the canvas, a new visual is created based on your selection.

## Create reports

More often, you'll want to create a collection of visuals that show various aspects of the data you've used to create your model in Power BI Desktop. A collection of visuals, in one Power BI Desktop file, is called a *report*. A report can have one or more pages, just like an Excel file can have one or more worksheets.

With Power BI Desktop you can create complex and visually rich reports, using data from multiple sources, all in one report that you can share with others in your organization.

In the following image, you see the first page of a Power BI Desktop report, named **Overview**, as seen on the tab near the bottom of the image.

## Share reports

After a report is ready to share with others, you can *publish* the report to the Power BI service, and make it available to anyone in your organization who has a Power BI license.

To publish a Power BI Desktop report:

1. Select **Publish** from the **Home** ribbon.

Power BI Desktop connects you to the Power BI service with your Power BI account.

2. Power BI prompts you to select where in the Power BI service you'd like to share the report, such as your workspace, a team workspace, or some other location in the Power BI service.

You must have a Power BI license to share reports to the Power BI service.

## Next steps

To get started with Power BI Desktop, the first thing you need is to download and install the application. There are a few ways to get Power BI Desktop:

- [Get Power BI Desktop from the Microsoft Store](#)
- [Get Power BI Desktop](#)
- [Download Power BI Desktop from the web](#)

# What is the Power BI service?

12/15/2022 • 2 minutes to read • [Edit Online](#)

**Power BI** is a collection of software services, apps, and connectors that work together to help you create, share, and consume business insights in the way that serves you and your business most effectively. The Microsoft Power BI *service* ([app.powerbi.com](http://app.powerbi.com)), sometimes referred to as Power BI online, is the SaaS (*Software as a Service*) part of Power BI. In the Power BI service, *dashboards* help you keep a finger on the pulse of your business. Dashboards display *tiles*, which you can select to open *reports* for exploring further. Dashboards and reports connect to *datasets* that bring all of the relevant data together in one place.

Need help with understanding the building blocks that make up Power BI? See [Basic concepts for designers in the Power BI service](#). Or visit our [playlist on YouTube](#). A good video to start with is *Introduction to the Power BI service*.

## NOTE

This video might use earlier versions of Power BI Desktop or the Power BI service.

<https://www.youtube.com/embed/B2vd4MQrz4M>

The other main components of Power BI are the Windows desktop application **Power BI Desktop** and the **Power BI mobile apps** for Windows, iOS, and Android devices. You and your colleagues can use these three elements—Power BI Desktop, the service, and the mobile apps—to create, share, and consume business insights. Read [What is Power BI](#) for an overview.

## Creating reports in the service

In a typical Power BI workflow, you begin by building a report in Power BI Desktop, then publishing it to the Power BI service.

This workflow is common, but you can also create Power BI reports right in the Power BI service. Do you have a subscription to a SaaS (software as a service) application like Salesforce? Power BI has apps that automatically create dashboards and reports from your online data. Get a head start by connecting to Salesforce or [check out the other SaaS apps](#) you can connect to. If you're part of an organization, someone in your organization may have published [apps](#) and distributed them to you.

## Sharing your findings

After you've created reports and dashboards, you can share them so end users in the Power BI service and mobile devices can view and interact with them. Being able to control how you share your work is one of the most important features of the Power BI service. You create workspaces where you and your colleagues can collaborate on reports and dashboards. Then you can bundle and distribute them as apps. You can also share the datasets themselves, so others can use them as a basis for their own reports. Read more about [ways to share your work in Power BI](#).

## Next steps

- Quickstart for consumers: [Learn your way around the Power BI service](#)
- [Tutorial: Get started with the Power BI service](#)

- Quickstart: Connect to data in Power BI Desktop

# Comparing Power BI Desktop and the Power BI service

12/15/2022 • 3 minutes to read • [Edit Online](#)

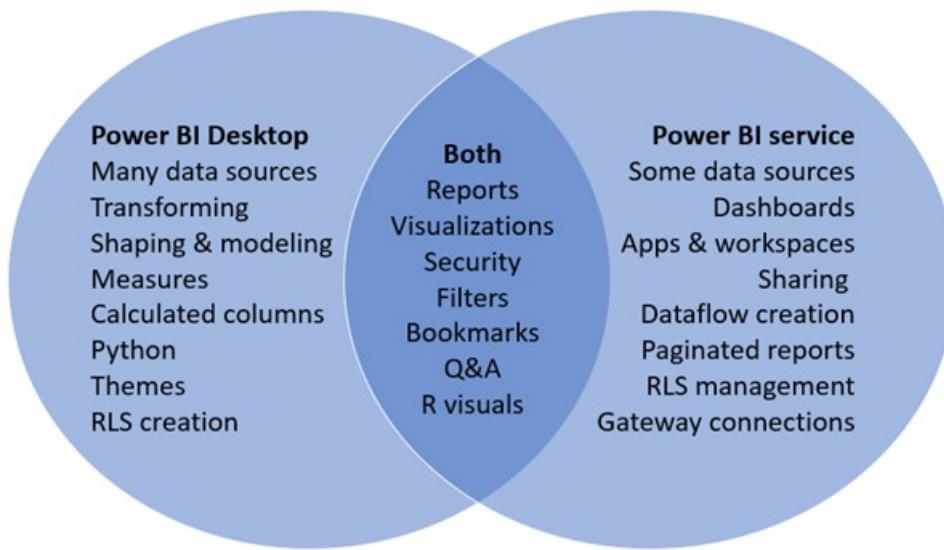
**Power BI Desktop** is an application that you download and install for free on your local computer. Desktop is a complete data analysis and report creation tool that is used to connect to, transform, visualize, and analyze your data. It includes the Query Editor, in which you can connect to many different sources of data, and combine them (often called modeling) into a data model. Then you design a report based on that data model. Reports can be shared with others directly or by publishing to the Power BI service. The [Power BI Desktop getting started guide](#) walks through the process.

The **Power BI service** is a cloud-based service, or *software as a service* (SaaS). It supports report editing and collaboration for teams and organizations. You can connect to data sources in the Power BI service, too, but modeling is limited. The Power BI service is used to do things such as creating dashboards, creating and sharing apps, analyzing and exploring your data to uncover business insights, and much more. [What is the Power BI service](#) details many of the capabilities of the Power BI service.

Most Power BI report designers who work on business intelligence projects use **Power BI Desktop** to create Power BI reports, and then use the **Power BI service** to collaborate and distribute their reports.

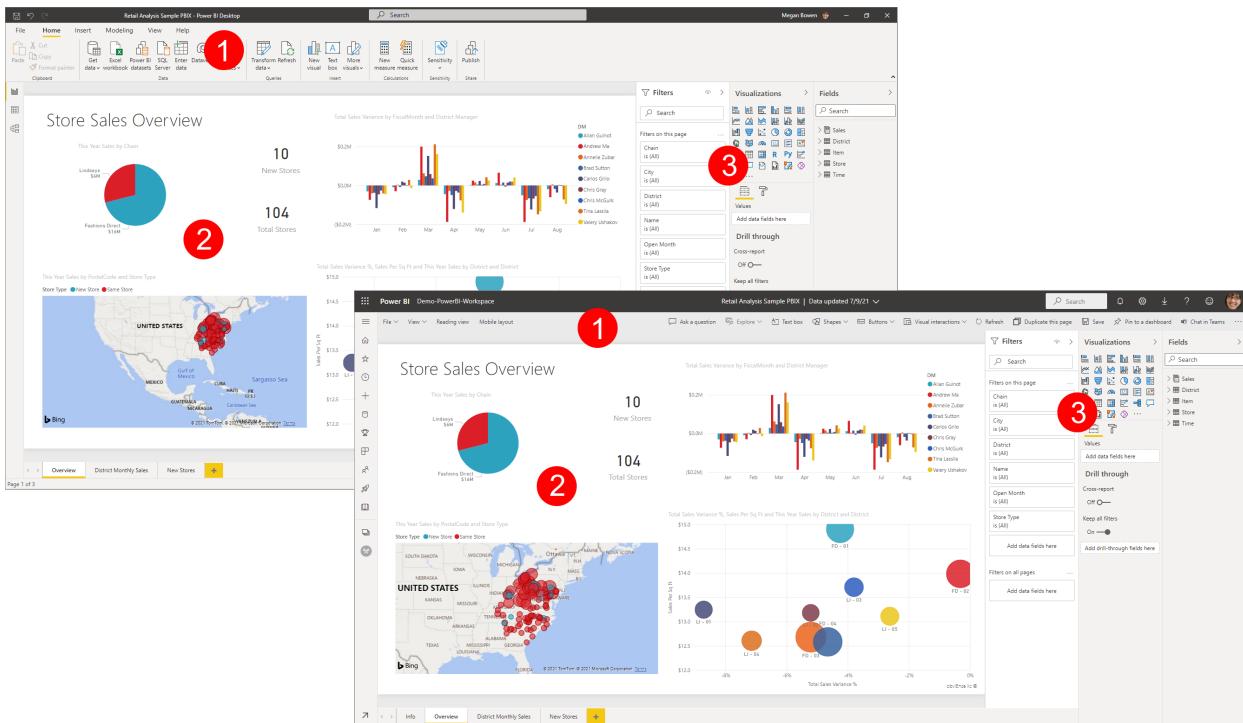
The Power BI service also hosts *paginated reports*. You create paginated reports with Power BI Report Builder. See [Compare Power BI reports and paginated reports](#) in the article "What are paginated reports in Power BI?" for more information.

In a Venn diagram comparing Power BI Desktop and the Power BI service, the area in the middle shows some of the areas where the two overlap. Some tasks you can do in either Power BI Desktop or the service. The two outer sides of the Venn diagram show the features that are unique to either the Desktop application or to the Power BI service.



## Editing Power BI reports

In both the application and the service, you build and edit Power BI *reports*. A report can have one or many pages, with visuals and collections of visuals. Add bookmarks, buttons, filters, and drillthrough, to enhance navigation in your reports.



The report editors in Power BI Desktop and in the service are similar. They're made up of three sections:

1. The top nav panes, different in Power BI Desktop and the service
2. The report canvas
3. The **Fields**, **Visualizations**, and **Filters** panes

This video shows the report editor in Power BI Desktop.

#### NOTE

This video might use earlier versions of Power BI Desktop or the Power BI service.

<https://www.youtube.com/embed/lkJda4O7oGs>

## Working in the Power BI service

### Collaborating

After you've created your reports, you can save them to a **workspace** in the **Power BI service**, where you and your colleagues collaborate. You build **dashboards** on top of those reports. Then, you share those dashboards and reports with report consumers inside and outside your organization. Your report consumers view them in the Power BI service in a *Reading view*, not *Editing view*. They don't have access to all the features available to report creators. You can also share your datasets and let others build their own reports from them. Read more about [collaborating in the Power BI service](#).

### Self-service data prep with dataflows

Dataflows help organizations unify data from disparate sources and prepare it for modeling. Analysts can easily create dataflows, using familiar, self-service tools. Analysts use dataflows to ingest, transform, integrate, and enrich big data by defining data source connections, ETL logic, refresh schedules, and more. Read more about [self-service data prep with dataflows](#).

## Next steps

[What is Power BI Desktop?](#)

[Create a report](#) in the Power BI service

[Basic concepts for report designers](#)

More questions? [Try the Power BI Community](#)

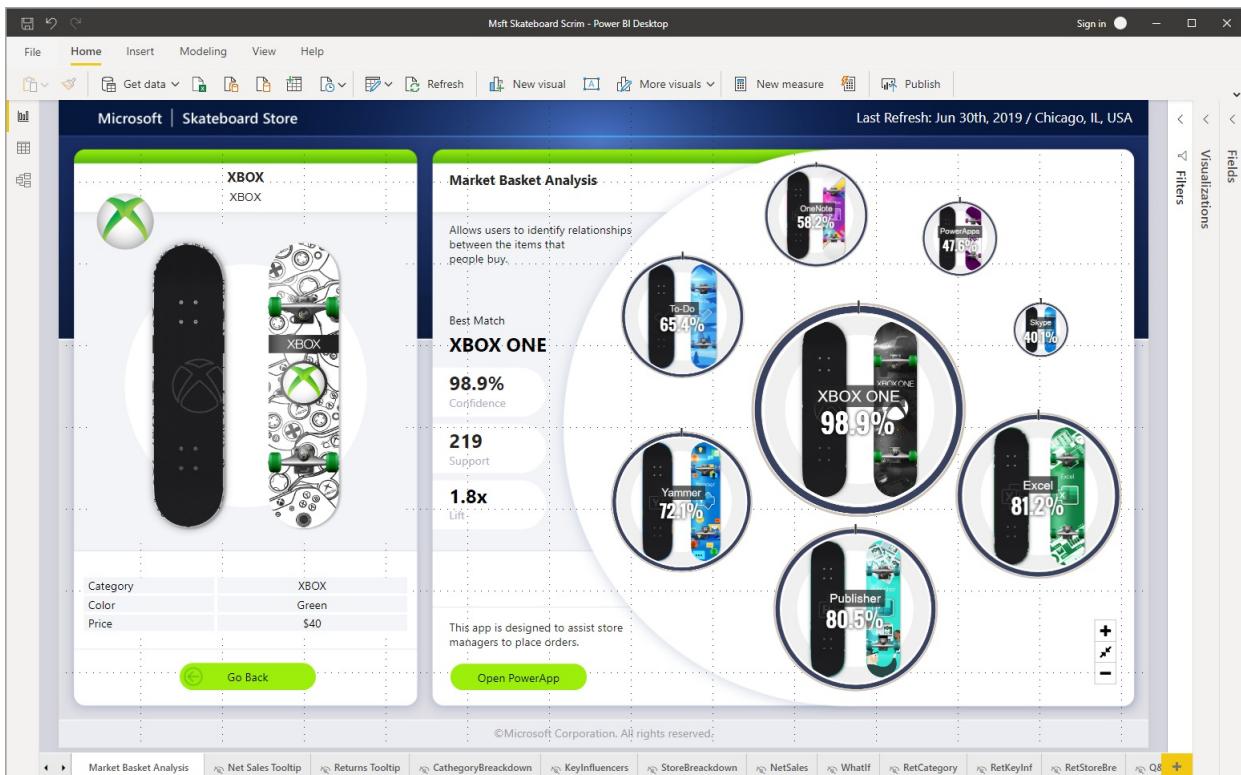
# Get started with Power BI Desktop

12/15/2022 • 20 minutes to read • [Edit Online](#)

APPLIES TO: ✓ Power BI Desktop ✓ Power BI service

Welcome to the getting started guide for Power BI Desktop. This tour shows you how Power BI Desktop works, what it can do, and how to build robust data models and amazing reports to amplify your business intelligence.

For a quick overview of how Power BI Desktop works and how to use it, you can scan the screens in this guide in just a few minutes. For a more thorough understanding, you can read through each section, perform the steps, and create your own Power BI Desktop file to post on the [Power BI service](#) and share with others.



You can also watch the [Getting Started with the Power BI Desktop](#) video, and download the [Financial Sample](#) Excel workbook to follow along with the video.

## IMPORTANT

You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

## How Power BI Desktop works

With Power BI Desktop, you can:

1. Connect to data, including multiple data sources.
2. Shape the data with queries that build insightful, compelling data models.
3. Use the data models to create visualizations and reports.
4. Share your report files for others to leverage, build upon, and share. You can share Power BI Desktop .pbix files like any other files, but the most compelling method is to upload them to the [Power BI service](#).

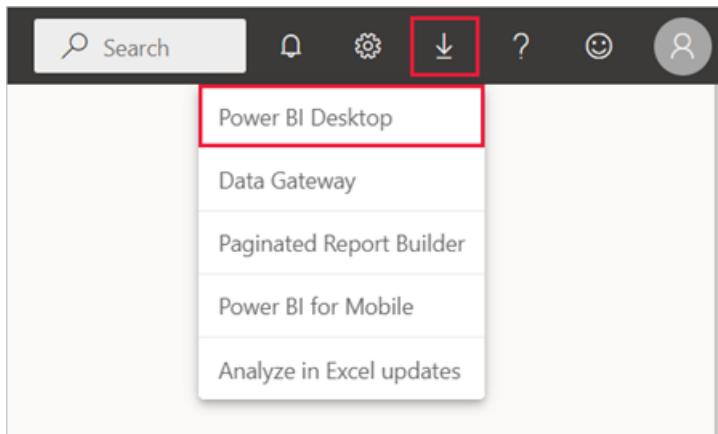
Power BI Desktop integrates proven Microsoft query engine, data modeling, and visualization technologies. Data analysts and others can create collections of queries, data connections, models, and reports, and easily share them with others. Through the combination of Power BI Desktop and the Power BI service, new insights from the world of data are easier to model, build, share, and extend.

Power BI Desktop centralizes, simplifies, and streamlines what can otherwise be a scattered, disconnected, and arduous process of designing and creating business intelligence repositories and reports. Ready to give it a try? Let's get started.

## Install and run Power BI Desktop

To download Power BI Desktop, go to the [Power BI Desktop download page](#) and select **Download Free**. Or for download options, select [See download or language options](#).

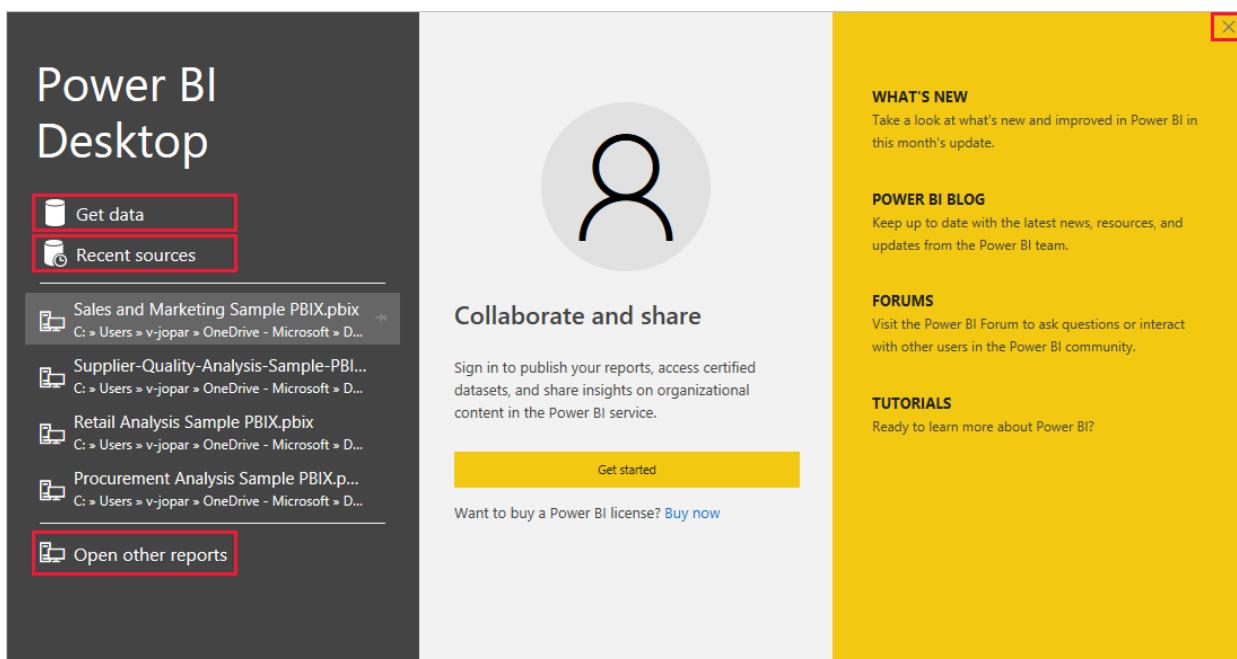
You can also download Power BI Desktop from the Power BI service. Select the **Download** icon in the top menu bar, and then select **Power BI Desktop**.



On the Microsoft Store page, select **Get**, and follow the prompts to install Power BI Desktop on your computer. Start Power BI Desktop from the Windows **Start** menu or from the icon in the Windows taskbar.

The first time Power BI Desktop starts, it displays the **Welcome** screen.

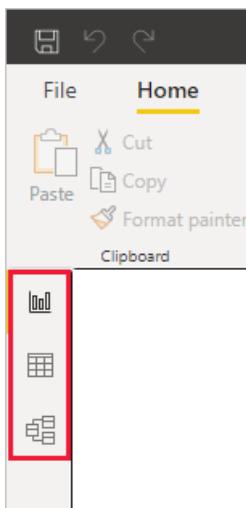
From the **Welcome** screen, you can **Get data**, see **Recent sources**, open recent reports, **Open other reports**, or select other links. Select the close icon to close the **Welcome** screen.



Along the left side of Power BI Desktop are icons for the three Power BI Desktop views: **Report**, **Data**, and

Model, from top to bottom. The current view is indicated by the yellow bar along the left, and you can change views by selecting any of the icons.

If you're using keyboard navigation, press Ctrl + F6 to move focus to that section of buttons in the window. To learn more about accessibility and Power BI, visit our [accessibility articles](#).



Report view is the default view.

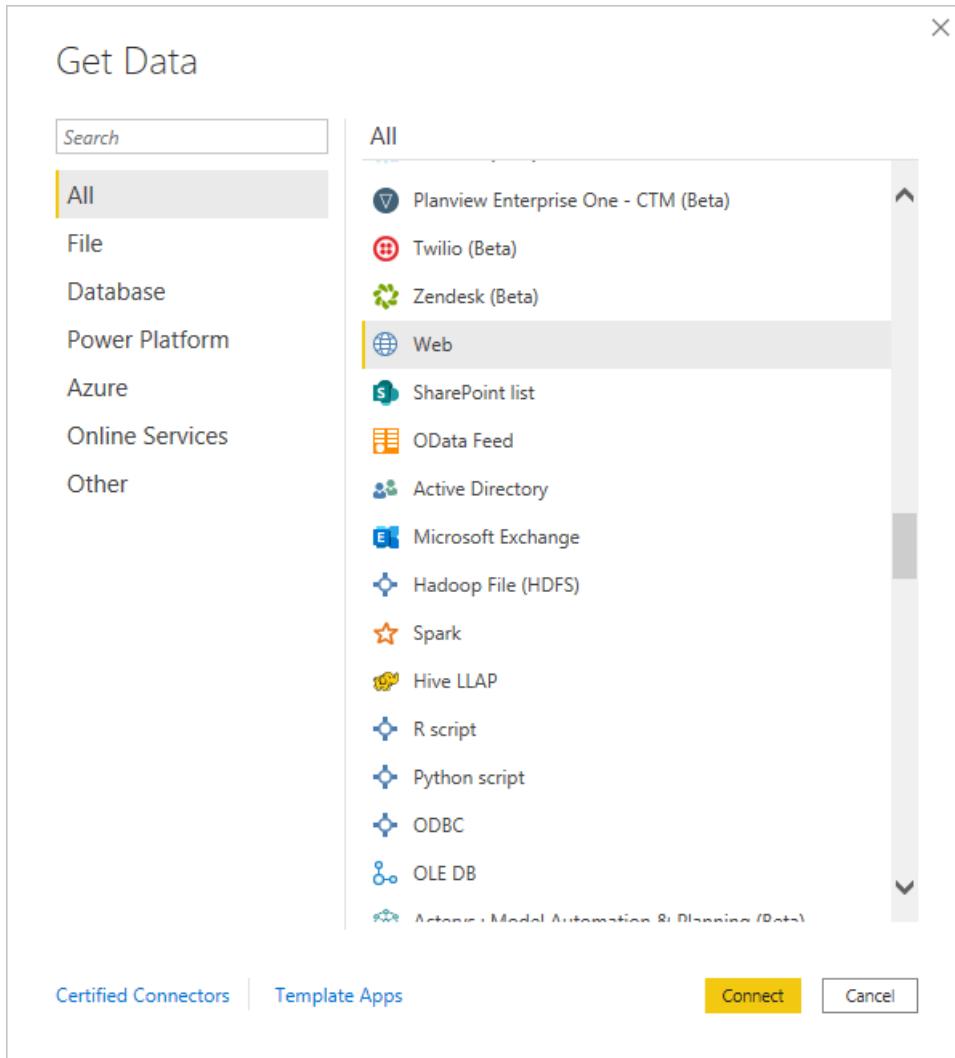
A screenshot of the Power BI Desktop application window titled 'Untitled - Power BI Desktop'. The ribbon at the top has 'Home' selected. The main area is divided into several sections: 'Clipboard' on the left with icons for Paste, Cut, Copy, and Format painter; 'Queries' (with Transform data, New visual, Refresh, and More visuals); 'Insert' (with New measure, Text box, Quick measure, and More visuals); 'Calculations' (with Sensitivity and Publish); 'Sensitivity' (with Sensitivity (preview) and Share); and 'Fields' (with Fields and a note 'You haven't loaded any data yet. Get data'). At the bottom, there are page navigation buttons ('Page 1', '+', and a yellow bar indicating the current page), and a status bar showing 'Page 1 of 1'.

Power BI Desktop also includes the **Power Query Editor**, which opens in a separate window. In **Power Query Editor**, you can build queries and transform data, then load the refined data model into Power BI Desktop to create reports.

## Connect to data

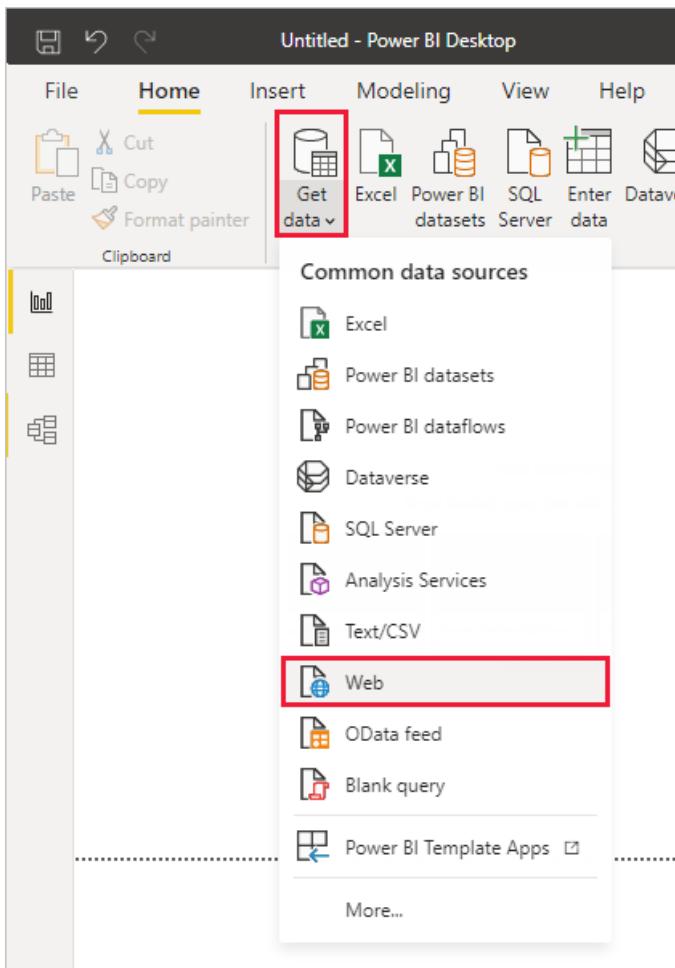
With Power BI Desktop installed, you're ready to connect to the ever-expanding world of data. To see the many

types of data sources available, select **Get Data > More** in the Power BI Desktop **Home** tab, and in the **Get Data** window, scroll through the list of **All** data sources. In this quick tour, you connect to a couple of different **Web** data sources.

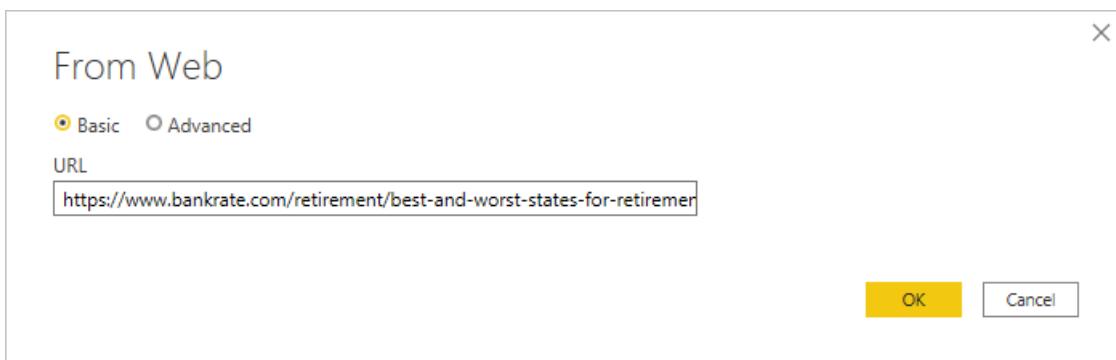


Imagine you're a data analyst working for a sunglasses retailer. You want to help your client target sunglasses sales where the sun shines most frequently. The Bankrate.com [Best and worst states for retirement](#) page has interesting data on this subject.

On the Power BI Desktop **Home** tab, select **Get Data > Web** to connect to a web data source.



In the **From Web** dialog box, paste the address <https://www.bankrate.com/retirement/best-and-worst-states-for-retirement/> into the URL field, and select OK.



If prompted, on the **Access Web Content** screen, select **Connect** to use anonymous access.

The query functionality of Power BI Desktop goes to work and contacts the web resource. The **Navigator** window returns what it found on the web page, in this case an HTML table called **Ranking of best and worst states for retirement**, and five other suggested tables. You're interested in the HTML table, so select it to see a preview.

At this point you can select **Load** to load the table, or **Transform data** to make changes in the table before you load it.

The screenshot shows the Power BI Navigator window. On the left, there's a sidebar with 'Display Options' and two sections: 'HTML Tables [1]' containing 'Ranking of best and worst states for retire...' and 'Suggested Tables [5]' containing 'Table 1' through 'Table 5'. The main area displays a table titled 'Ranking of best and worst states for retirement'. The table has two columns: 'Column1' (State) and 'Column2' (Overall rank). The data includes rows for Nebraska (rank 1), Iowa (rank 2), Missouri (rank 3), South Dakota (rank 4), Florida (rank 5), Kentucky (rank 6), Kansas (rank 7), North Carolina (rank 7), Montana (rank 9), Hawaii (rank 10), Arkansas (rank 11), Wisconsin (rank 12), North Dakota (rank 13), Vermont (rank 14), New Hampshire (rank 15), Alabama (rank 16), Texas (rank 17), Idaho (rank 18), and Mississippi (rank 19). At the bottom of the table are 'Load' and 'Transform Data' buttons, with 'Transform Data' being highlighted by a red box.

When you select **Transform data**, Power Query Editor launches, with a representative view of the table. The **Query Settings** pane is on the right, or you can always show it by selecting **Query Settings** on the **View** tab of Power Query Editor.

The screenshot shows the Power Query Editor window. The top ribbon has tabs like File, Home, Transform, Add Column, View, Tools, and Help. The main area shows a table with columns: Column1, Column2, Column3, Column4, and Column5. The 'Query Settings' pane on the right shows the 'PROPERTIES' section with 'Name' set to 'Ranking of best and worst states for retire...' and the 'APPLIED STEPS' section which lists 'Source' (Extracted Table From Html) and 'Changed Type'. The status bar at the bottom says '7 COLUMNS, 52 ROWS' and 'Column profiling based on top 1000 rows'.

For more information about connecting to data, see [Connect to data in Power BI Desktop](#).

## Shape data

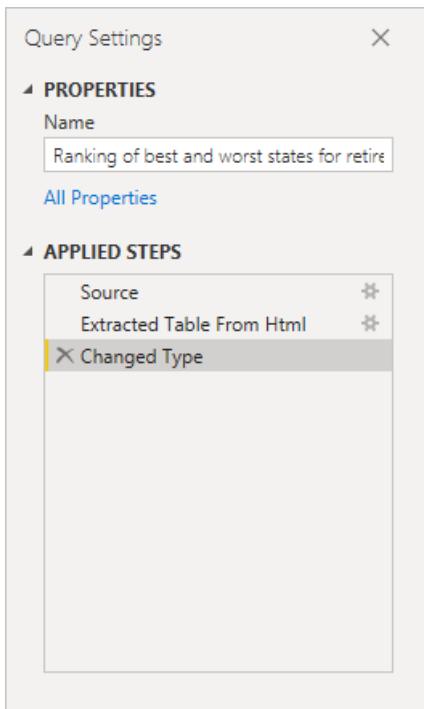
Now that you're connected to a data source, you can adjust the data to meet your needs. To *shape* data, you provide Power Query Editor with step-by-step instructions for adjusting the data while loading and presenting it. Shaping doesn't affect the original data source, only this particular view of the data.

#### NOTE

The table data used in this guide might change over time. As such, the steps you need to follow might vary, requiring you to be creative about how you adjust steps or outcomes, which is all part of the fun of learning.

Shaping can mean *transforming* the data, such as renaming columns or tables, removing rows or columns, or changing data types. Power Query Editor captures these steps sequentially under **Applied Steps** in the **Query Settings** pane. Each time this query connects to the data source, those steps are carried out, so the data is always shaped the way you specify. This process occurs when you use the query in Power BI Desktop, or when anyone uses your shared query, such as in the Power BI service.

Notice that the **Applied Steps** in **Query Settings** already contain a few steps. You can select each step to see its effect in the Power Query Editor. First, you specified a web source, and then you previewed the table in the **Navigator** window. In the third step, **Changed type**, Power BI recognized whole number data when importing it, and automatically changed the original web **Text** *data type* to **Whole numbers**.



If you need to change a data type, select the column or columns to change. Hold down the **Shift** key to select several adjacent columns, or **Ctrl** to select non-adjacent columns. Either right-click a column header, select **Change Type**, and choose a new data type from the menu, or drop down the list next to **Data Type** in the **Transform** group of the **Home** tab, and select a new data type.

The screenshot shows the Power Query Editor interface. A context menu is open over the first column ('Column1') of a table. The menu path 'Column1' > 'Change Type' is highlighted with a red box. The 'Text' option under the 'Text' category is also highlighted with a red box. The top ribbon bar shows tabs like File, Home, Transform, Add Column, View, Tools, and Help. The 'Data Type' dropdown in the ribbon is set to 'Text'. The status bar at the bottom indicates '7 COLUMNS, 52 ROWS' and 'Column profiling based on top 1000 rows'.

#### NOTE

The Power Query Editor in Power BI Desktop uses the ribbon or the right-click menus for available tasks. Most of the tasks you can select on the **Home** or **Transform** tabs of the ribbon are also available by right-clicking an item and choosing from the menu that appears.

You can now apply your own changes and transformations to the data and see them in **Applied Steps**.

For example, for sunglasses sales you're most interested in the weather ranking, so you decide to sort the table by the **Weather** column instead of by **Overall rank**. Drop down the arrow next to the **Weather** header, and select **Sort ascending**. The data now appears sorted by weather ranking, and the step **Sorted Rows** appears in **Applied Steps**.

The screenshot shows the 'Query Settings' dialog box. In the 'APPLIED STEPS' section, the 'Sorted Rows' step is highlighted with a red box. The other steps listed are Source, Extracted Table From Html, Changed Type, Promoted Headers, Changed Type1, and Removed Top Rows.

You're not very interested in selling sunglasses to the worst weather states, so you decide to remove them from the table. From the **Home** tab, select **Reduce Rows** > **Remove Rows** > **Remove Bottom Rows**. In the **Remove Bottom Rows** dialog box, enter **10**, and then select **OK**.

The screenshot shows the Power Query Editor interface with the 'Home' tab selected. A table named 'Ranking of best and worst states for retire' is open. In the 'Transform' ribbon, the 'Reduce Rows' button is highlighted. A context menu is open over the table, with 'Remove Bottom Rows' selected. A dialog box titled 'Remove Bottom Rows' is displayed, asking for the number of rows to remove from the bottom. The value '10' is entered in the input field. The 'OK' button is highlighted.

The bottom 10 worst weather rows are removed from the table, and the step **Removed Bottom Rows** appears in **Applied Steps**.

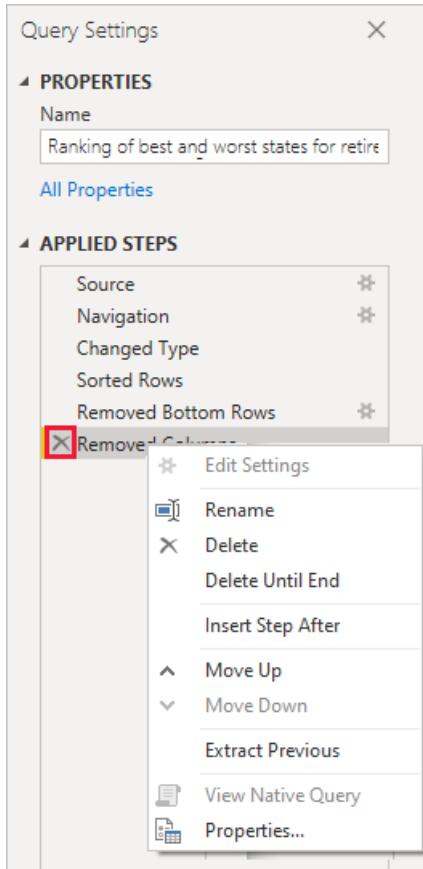
You decide the table has too much extra information for your needs, and to remove the **Affordability**, **Crime**, **Culture**, and **Wellness** columns. Select the header of each column that you want to remove. Hold down the **Shift** key to select several adjacent columns, or **Ctrl** to select non-adjacent columns.

Then, from the **Manage Columns** group of the Home tab, select **Remove Columns**. You can also right-click one of the selected column headers and select **Remove Columns** from the menu. The selected columns are removed, and the step **Removed Columns** appears in **Applied Steps**.

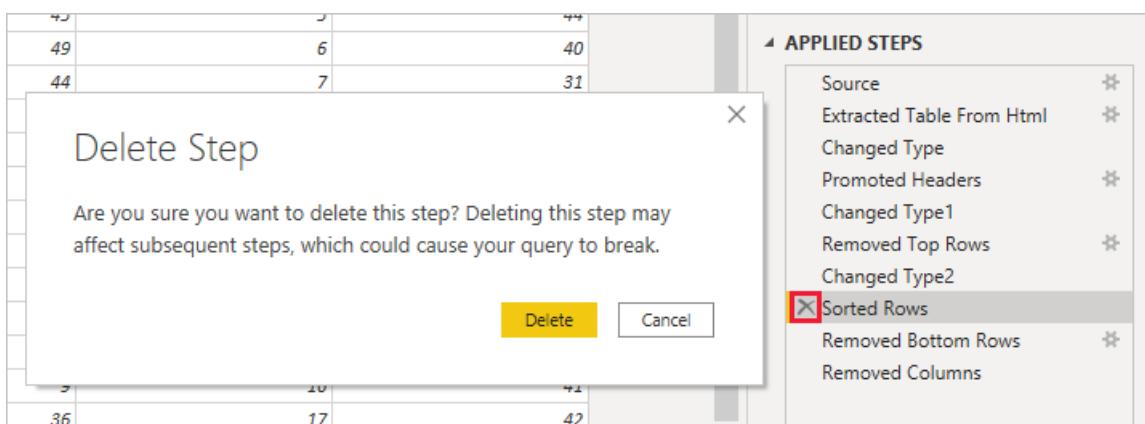
The screenshot shows the Power Query Editor interface with the 'Home' tab selected. A table is open, and the 'Manage Columns' button in the ribbon is highlighted. A context menu is open over the table, with 'Remove Columns' selected. The 'Remove Columns' option is highlighted in the menu. The 'Applied Steps' pane on the right shows the step 'Removed Columns'.

On second thought, **Affordability** might be relevant to sunglasses sales after all. You'd like to get that column back. You can easily undo the last step in the **Applied Steps** pane by selecting the X delete icon next to the step. Now redo the step, selecting only the columns you want to delete. For more flexibility, you could delete each column as a separate step.

You can right-click any step in the **Applied Steps** pane and choose to delete it, rename it, move it up or down in the sequence, or add or delete steps after it. For intermediate steps, Power BI Desktop will warn you if the change could affect later steps and break your query.



For example, if you no longer wanted to sort the table by **Weather**, you might try to delete the **Sorted Rows** step. Power BI Desktop warns you that deleting this step could cause your query to break. You removed the bottom 10 rows after you sorted by weather, so if you remove the sort, different rows will be removed. You also get a warning if you select the **Sorted Rows** step and try to add a new intermediate step at that point.



Finally, you change the table title to be about sunglasses sales instead of retirement. Under **Properties** in the **Query Settings** pane, replace the old title with *Best states for sunglasses sales*.

The finished query for your shaped data looks like this:

The screenshot shows the Power Query Editor interface. In the center, there is a table with four columns: State, Overall rank, Affordability, and Weather. The 'Affordability' column is highlighted in yellow. On the right side, there is a 'Query Settings' pane with sections for 'PROPERTIES' (Name: Best states for sunglass sales) and 'APPLIED STEPS'. The 'APPLIED STEPS' section lists several steps, with 'Removed Columns' being the last one listed.

For more information about shaping data, see [Shape and combine data in Power BI Desktop](#).

## Combine data

The data about various states is interesting, and will be useful for building additional analysis efforts and queries. But there's one problem: most data out there uses two-letter abbreviations for state codes, not the full names of the states. To use that data, you need some way to associate your state names with their abbreviations.

You're in luck. Another public data source does just that, but the data will need a fair amount of shaping before you can *combine* it with your sunglass table.

To import the state abbreviations data into Power Query Editor, select **New Source > Web** from the **New Query** group on the **Home** tab of the ribbon.

The screenshot shows the Power Query Editor ribbon. The 'File' tab is selected. In the 'New Source' dropdown, the 'Web' option is highlighted with a red box. The 'Web' option is also highlighted with a red box in the list of options below.

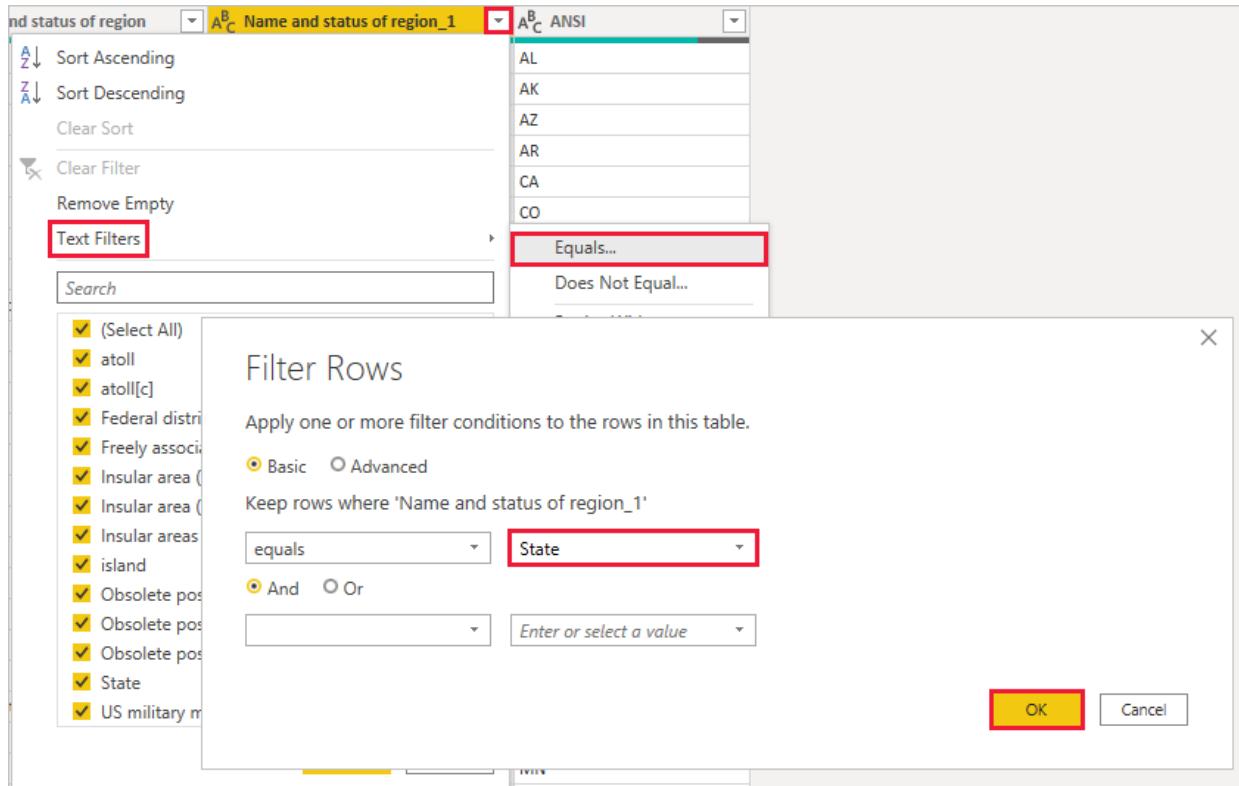
In the **From Web** dialog box, enter the URL for the state abbreviations site:

[https://en.wikipedia.org/wiki/List\\_of\\_U.S.\\_state\\_abbreviations](https://en.wikipedia.org/wiki/List_of_U.S._state_abbreviations).

In the Navigator window, select the table **Codes and abbreviations for U.S. states, federal district, territories, and other regions**, and then select OK. The table opens in Power Query Editor.

Remove all columns except for **Name and status of region**, **Name and status of region**, and **ANSI**. To keep only these columns, hold down **Ctrl** and select the columns. Then, either right-click one of the column headers and select **Remove Other Columns**, or, from the **Manage Columns** group of the **Home** tab, select **Remove Other Columns**.

Drop down the arrow next to the **Name and status of region\_1** column header, and select **Filters > Equals**. In the **Filter Rows** dialog box, drop down the **Enter or select a value** field next to **equals** and select **State**. Select **OK**.



With extra values like **Federal district** and **island** removed, you now have a list of the 50 states and their official two-letter abbreviations. You can rename the columns to make more sense, for example **State name**, **Status**, and **Abbreviation**, by right-clicking the column headers and selecting **Rename**.

Note that all of these steps are recorded under **Applied Steps** in the **Query Settings** pane.

Your shaped table now looks like this:

	A <sup>B</sup> <sub>C</sub> State name	A <sup>B</sup> <sub>C</sub> Status	A <sup>B</sup> <sub>C</sub> Abbreviation
1	Alabama	State	AL
2	Alaska	State	AK
3	Arizona	State	AZ
4	Arkansas	State	AR
5	California	State	CA
6	Colorado	State	CO
7	Connecticut	State	CT
8	Delaware	State	DE
9	Florida	State	FL
10	Georgia	State	GA
11	Hawaii	State	HI
12	Idaho	State	ID
13	Illinois	State	IL
14	Indiana	State	IN
15	Iowa	State	IA
16	Kansas	State	KS
17	Kentucky	State	KY

Retitle the table to *State codes* in the **Properties** field of **Query Settings**.

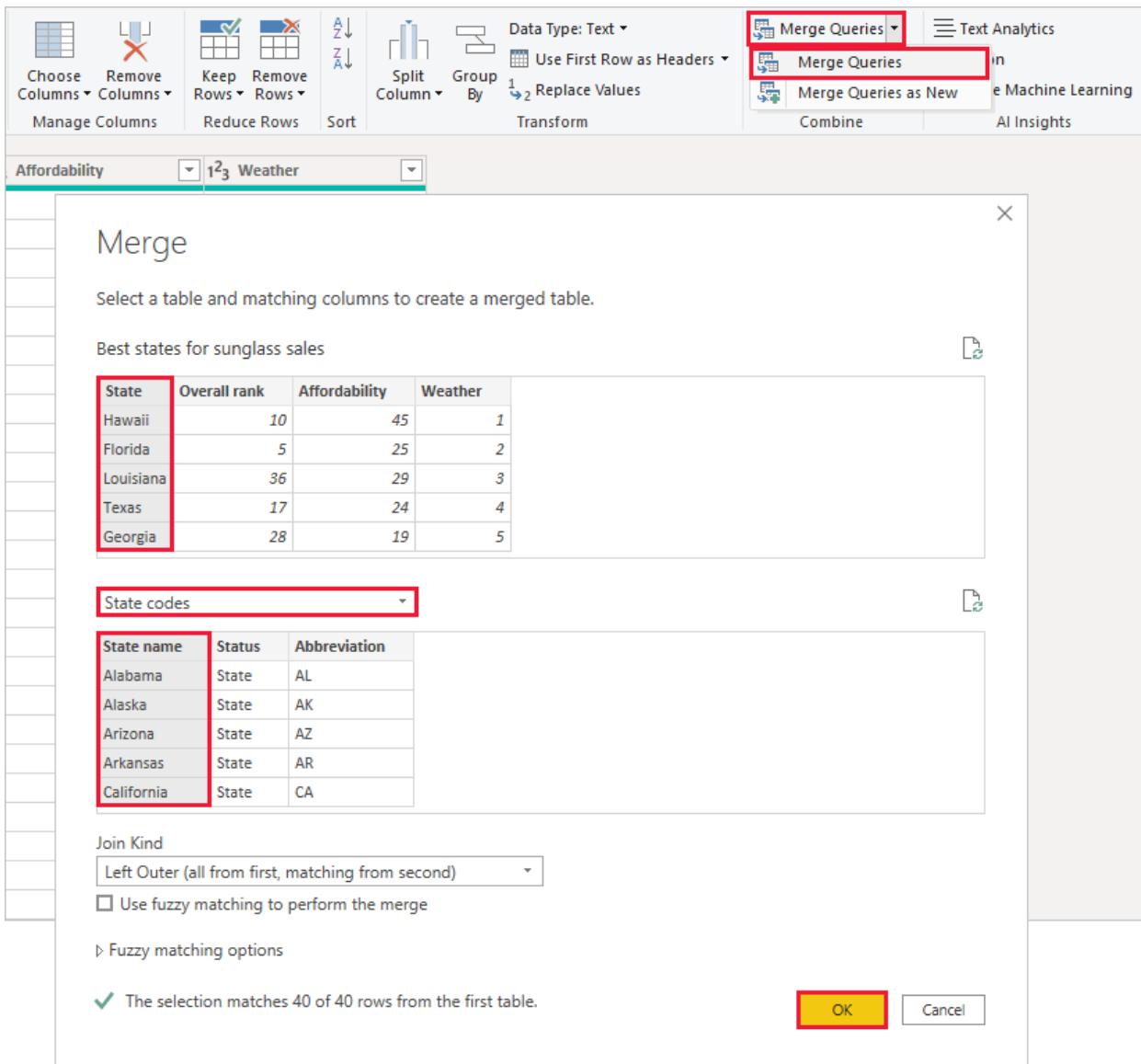
With the **State codes** table shaped, you can *combine* these two tables into one. Since the tables you now have are a result of queries you applied to the data, they're also called *queries*. There are two primary ways of combining queries: *merge* and *append*.

When you have one or more columns you'd like to add to another query, you *merge* the queries. When you have additional rows of data you'd like to add to an existing query, you *append* the query.

In this case, you want to *merge* the **State codes** query into the **Best states for sunglasses** query. To merge the queries, switch to the **Best states for sunglasses** query by selecting it from the **Queries** pane on the left side of Power Query Editor. Then select **Merge Queries** from the **Combine** group in the **Home** tab of the ribbon.

In the **Merge** window, drop down the field to select **State codes** from the other queries available. Select the column to match from each table, in this case **State** from the **Best states for sunglasses** query and **State name** from the **State codes** query.

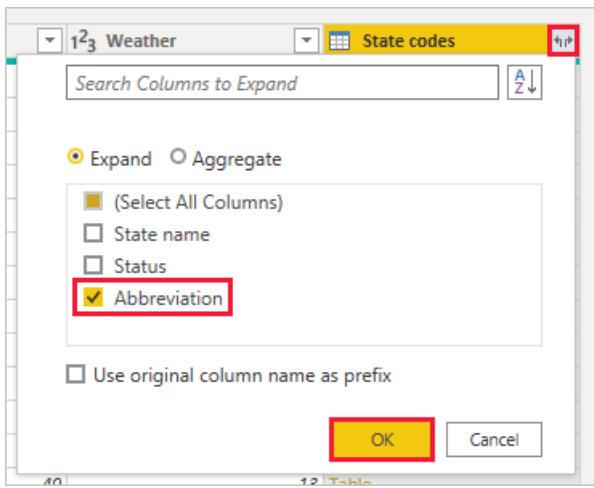
If you get a **Privacy levels** dialog, select **Ignore privacy levels checks for this file** and then select **Save**. Select **OK**.



A new column called **State codes** appears on the right of the **Best states for sunglass sales** table. It contains the state code query that you merged with the best states for sunglass sales query. All the columns from the merged table are condensed into the **State codes** column. You can *expand* the merged table and include only the columns you want.

	State	Overall rank	Affordability	Weather	State codes
1	Hawaii	10	45	1	1 Table
2	Florida	5	25	2	2 Table
3	Louisiana	36	29	3	3 Table
4	Texas	17	24	4	4 Table
5	Georgia	28	19	5	5 Table
6	Mississippi	19	6	6	6 Table
7	Alabama	16	10	7	7 Table
8	South Carolina	41	27	8	8 Table
9	Arkansas	11	4	9	9 Table
10	Arizona	38	33	10	10 Table
11	Oklahoma	21	11	11	11 Table
12	North Carolina	7	13	12	12 Table
13	California	43	49	13	13 Table
14	Tennessee	22	12	14	14 Table
15	Kentucky	6	9	15	15 Table

To expand the merged table and select which columns to include, select the **Expand** icon in the column header. In the **Expand** dialog box, select only the **Abbreviation** column. Deselect **Use original column name as prefix**, and then select **OK**.



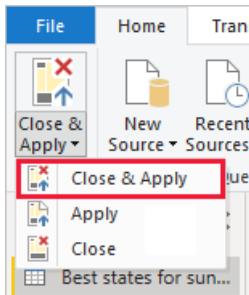
#### NOTE

You can play around with how to bring in the **State codes** table. Experiment a bit, and if you don't like the results, just delete that step from the **Applied Steps** list in the **Query Settings** pane. It's a free do-over, which you can do as many times as you like until the expand process looks the way you want it.

For a more complete description of the shape and combine data steps, see [Shape and combine data in Power BI Desktop](#).

You now have a single query table that combines two data sources, each of which has been shaped to meet your needs. This query can serve as a basis for more interesting data connections, such as demographics, wealth levels, or recreational opportunities in the states.

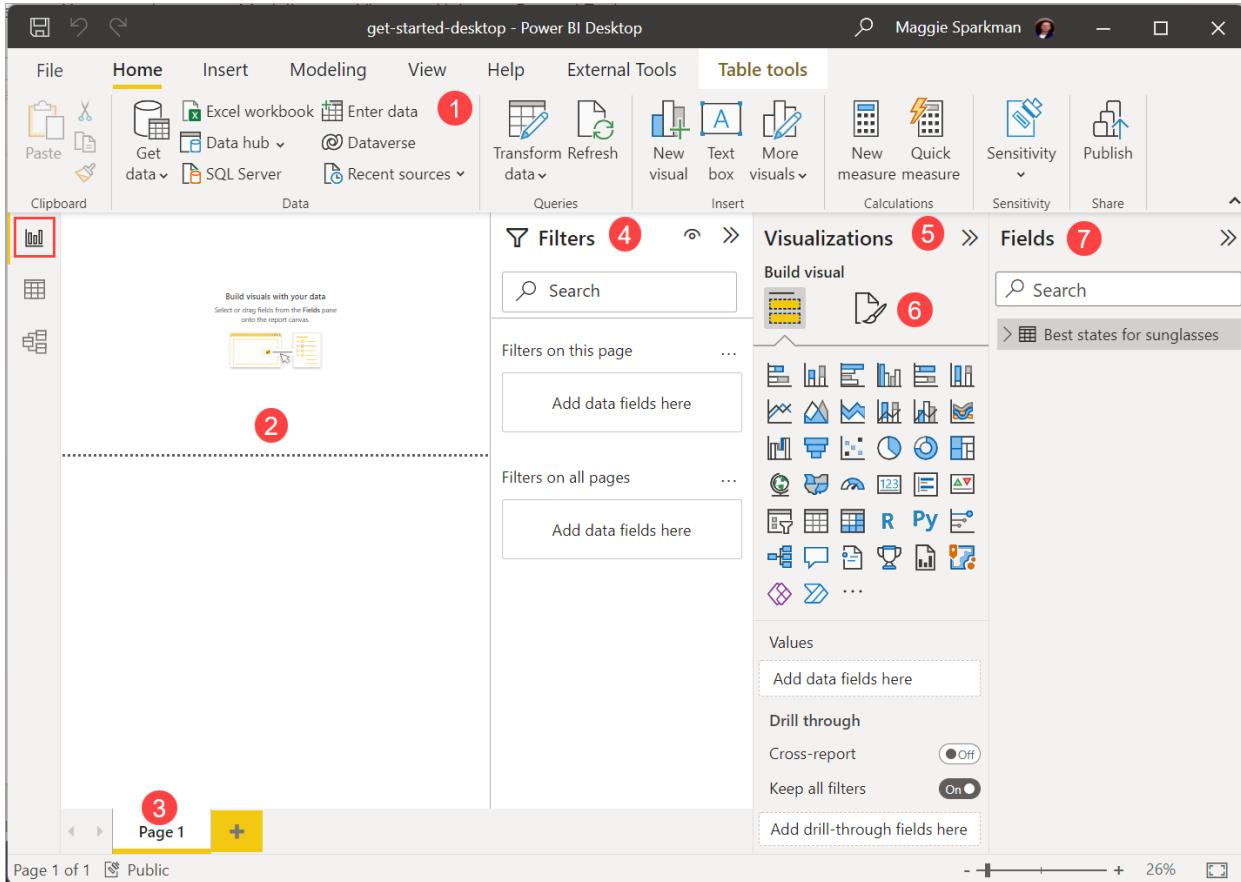
For now, you have enough data to create an interesting report in Power BI Desktop. Since this is a milestone, apply the changes in **Power Query Editor** and load them into Power BI Desktop by selecting **Close & Apply** from the **Home** tab of the ribbon. You can also select just **Apply** to keep the query open in Power Query Editor while you work in Power BI Desktop.



You can make more changes to a table after it's loaded into Power BI Desktop, and reload the model to apply any changes you make. To reopen **Power Query Editor** from Power BI Desktop, select **Transform Data** on the **Home** tab of the Power BI Desktop ribbon.

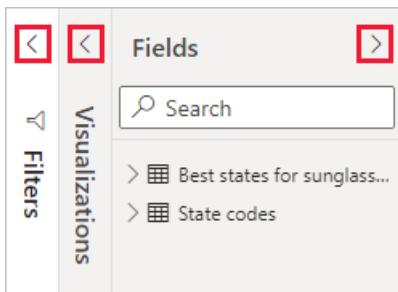
## Build reports

In Power BI Desktop **Report** view, you can build visualizations and reports. The **Report** view has six main areas:



1. The ribbon at the top, which displays common tasks associated with reports and visualizations.
2. The canvas area in the middle, where you create and arrange visualizations.
3. The pages tab area at the bottom, which lets you select or add report pages.
4. The **Filters** pane, where you can filter data visualizations.
5. The **Visualizations** pane, where you can add, change, or customize visualizations, and apply drillthrough.
6. The **Format** pane, where you design the report and visualizations.
7. The **Fields** pane, which shows the available fields in your queries. You can drag these fields onto the canvas, the **Filters** pane, or the **Visualizations** pane to create or modify visualizations.

You can expand and collapse the **Filters**, **Visualizations**, and **Fields** panes by selecting the arrows at the tops of the panes. Collapsing the panes provides more space on the canvas to build cool visualizations.



To create a simple visualization, just select any field in the fields list, or drag the field from the **Fields** list onto the canvas. For example, drag the **State** field from **Best states for sunglass sales** onto the canvas, and see what happens.

The screenshot shows the Power BI Desktop interface. On the left is a map visualization titled "State" showing the United States and parts of Canada and Mexico. The map has blue dots representing data points across the continental US. On the right is the Fields pane, which includes a search bar and a list of fields. The "State" field is selected and highlighted with a red box. Other fields listed include "Abbreviation", "Affordability", "Overall rank", and "Weather". Below the Fields pane is the Visualizations pane, which contains information about the current visualization.

Look at that! Power BI Desktop recognized that the **State** field contained geolocation data and automatically created a map-based visualization. The visualization shows data points for the 40 states from your data model.

The **Visualizations** pane shows information about the visualization and lets you modify it.

The screenshot shows the 'Visualizations' pane in Power BI. At the top, there are three icons: a grid (labeled 1), a paintbrush (labeled 2), and a magnifying glass. Below these are several rows of visualization icons, including bar charts, line graphs, maps, and other data visualizations. A specific icon in the third row, which looks like a map with a legend, is highlighted with a red circle and labeled '3'. To the right of the visualization icons is a list of fields: 'State', 'Legend', 'Add data fields here', 'Latitude', 'Add data fields here', 'Longitude', 'Add data fields here', 'Bubble size', 'Add data fields here', 'Toolips', and 'Add data fields here'. Each field has a dashed border around its input field.

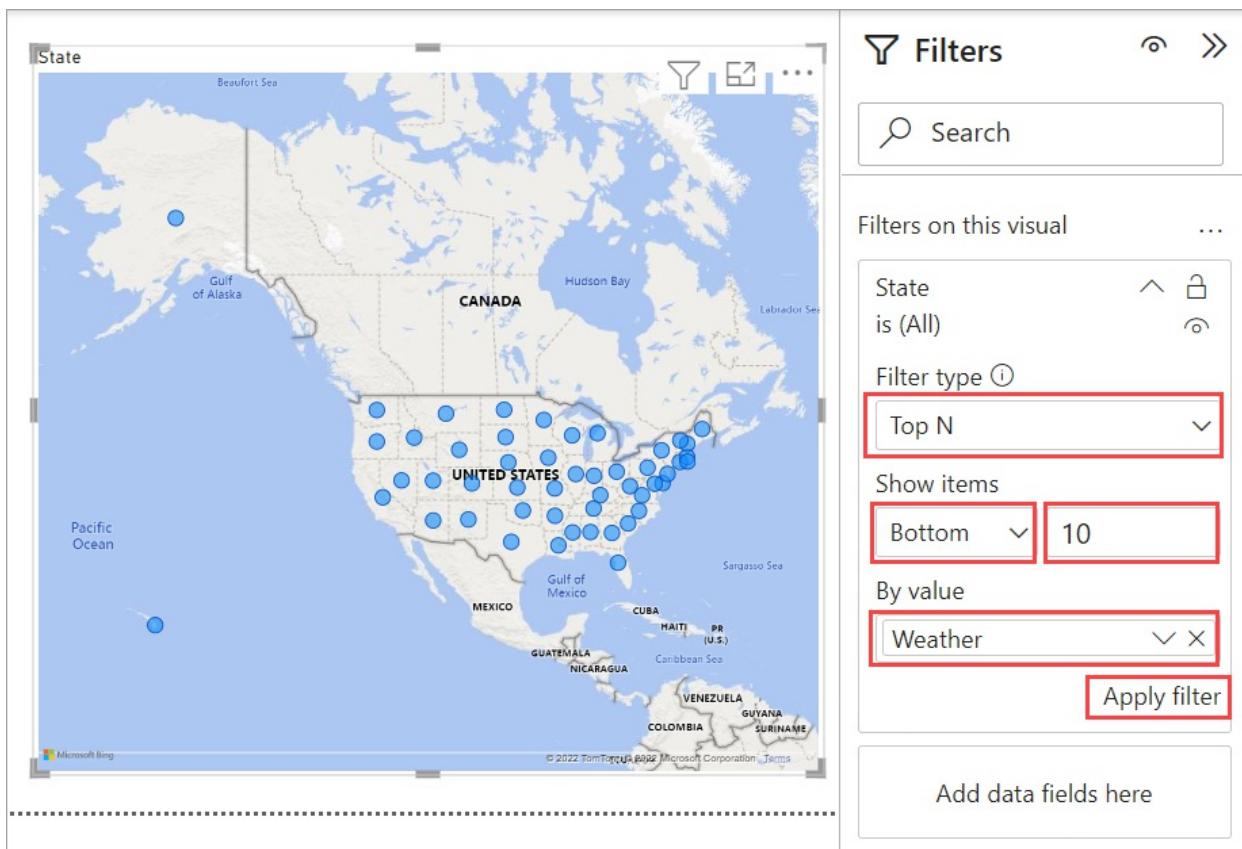
1. The **Fields** option in the **Visualization** pane lets you drag data fields to **Legend** and other field wells in the pane.
2. The **Format** option lets you apply formatting and other controls to visualizations.
3. The icons show the type of visualization created. You can change the type of a selected visualization by selecting a different icon, or create a new visualization by selecting an icon with no existing visualization selected.

The options available in the **Fields** and **Format** areas depend on the type of visualization and data you have.

You want your map visualization to show only the top 10 weather states. To show only the top 10 states, in the **Filters** pane, hover over **State is (All)** and expand the arrow that appears. Under **Filter type**, drop down and select **Top N**. Under **Show items**, select **Bottom**, because you want to show the items with the lowest

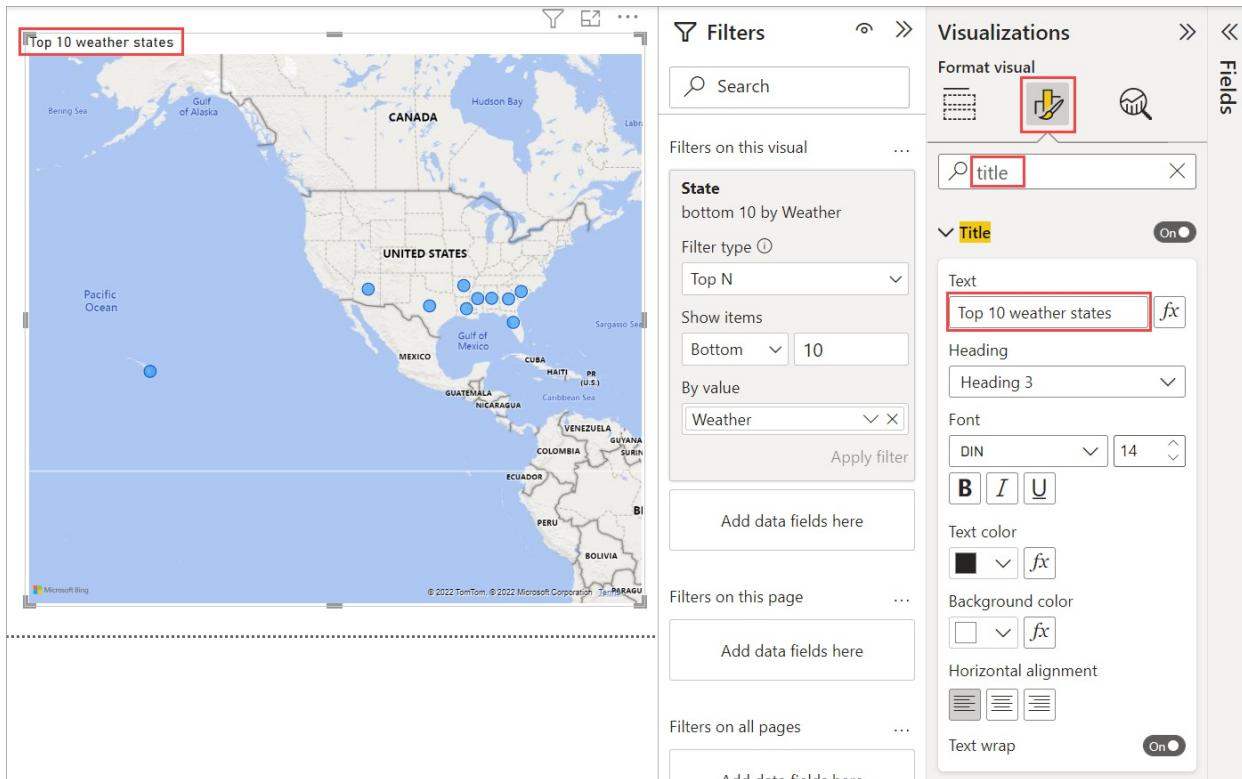
numerical ranks, and enter *10* in the next field.

Drag the **Weather** field from the **Fields** pane into the **By value** field, and then select **Apply filter**.



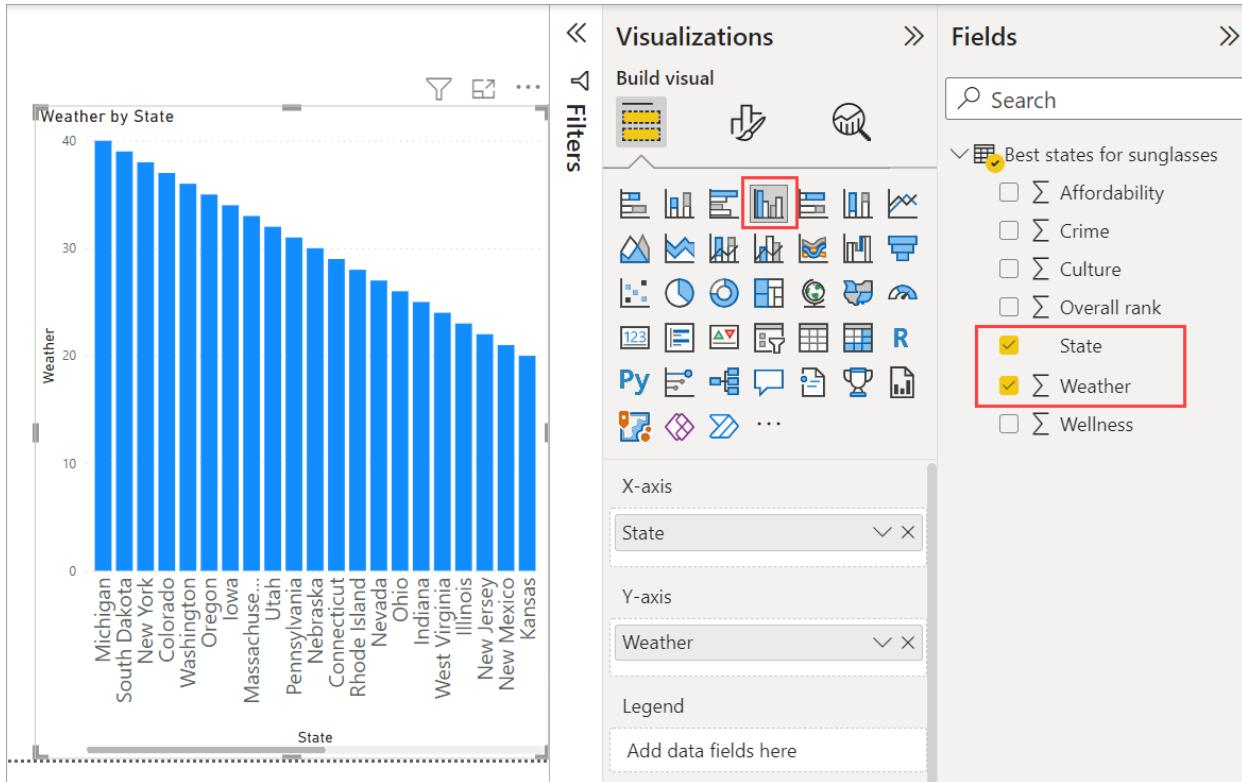
You now see only the top 10 weather states in the map visualization.

You can retitle your visualization. Select the **Format** icon in the **Visualization** pane, and type *title* in the **Search** box. In the **Title** card, type *Top 10 weather states* under **Text**.

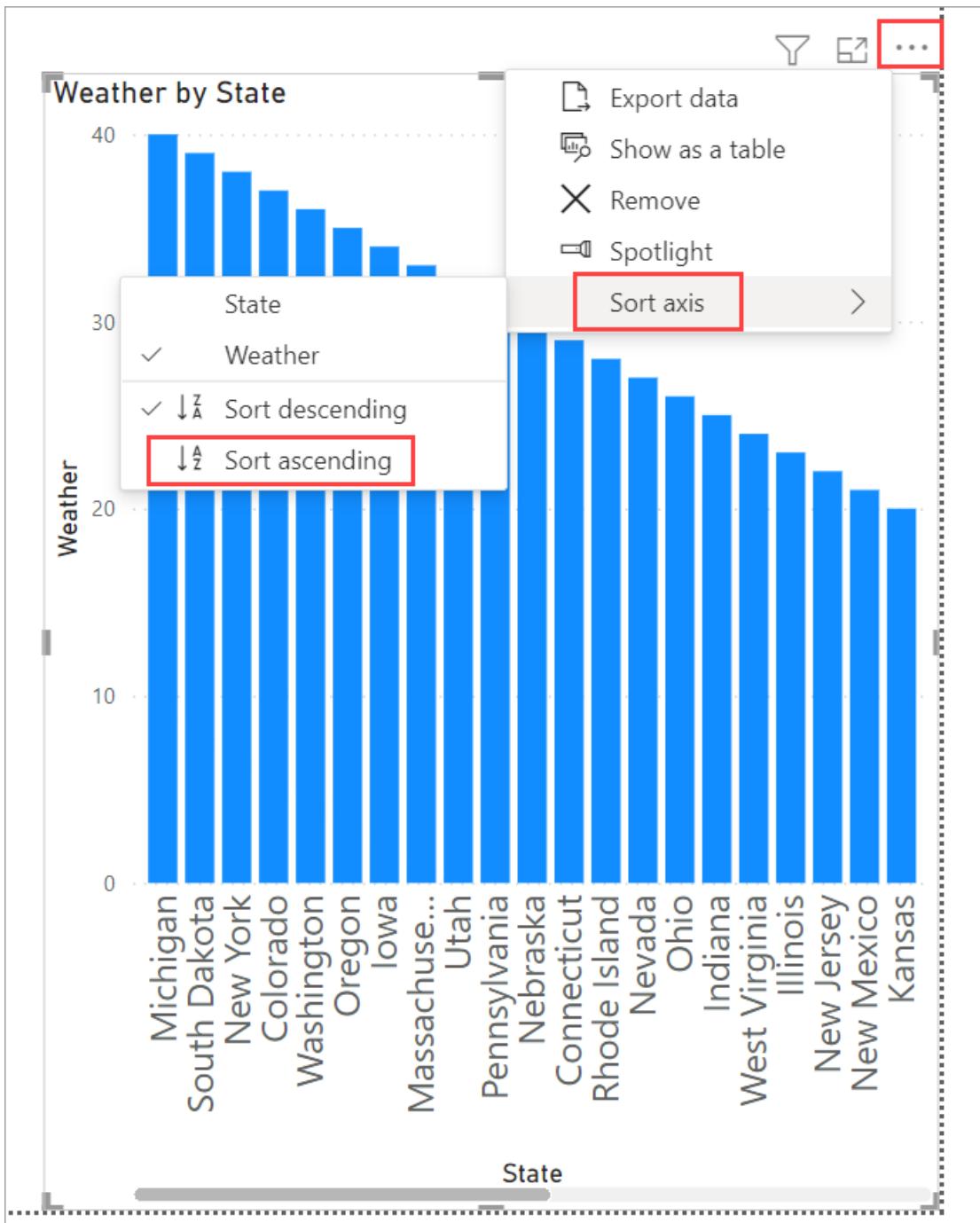


To add a visualization that shows the names of the top 10 weather states and their ranks from 1 to 10, select a blank area of the canvas and then select the **Clustered column chart** icon from the **Visualization** pane. In the **Fields** pane, select **State** and **Weather**. A column chart shows the 40 states in your query, ranked from highest

to lowest numerical rank, or worst to best weather.



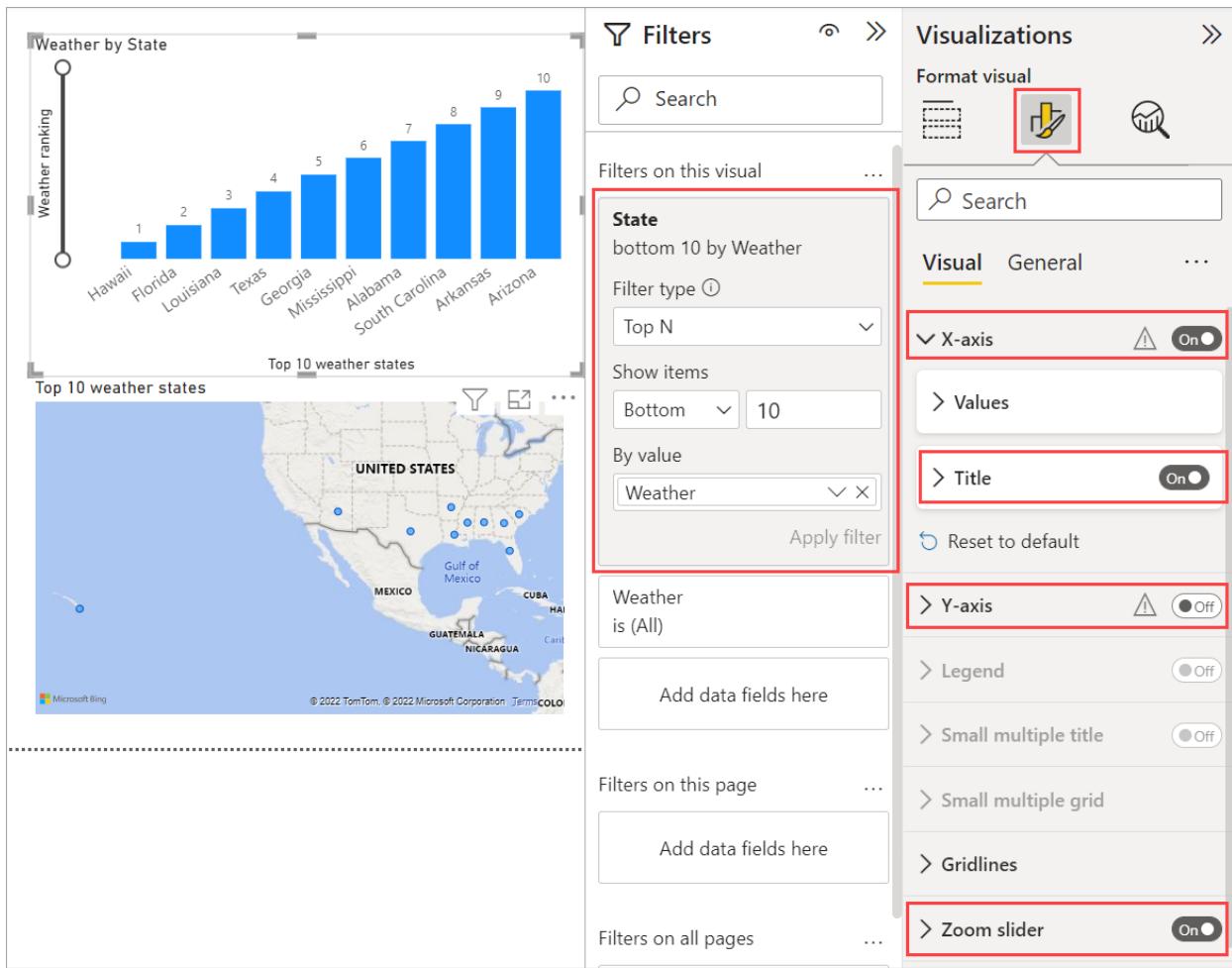
To switch the order of the ranking so that number 1 appears first, select **More options (...)** at the upper right of the visualization, and select **Sort ascending** from the menu.



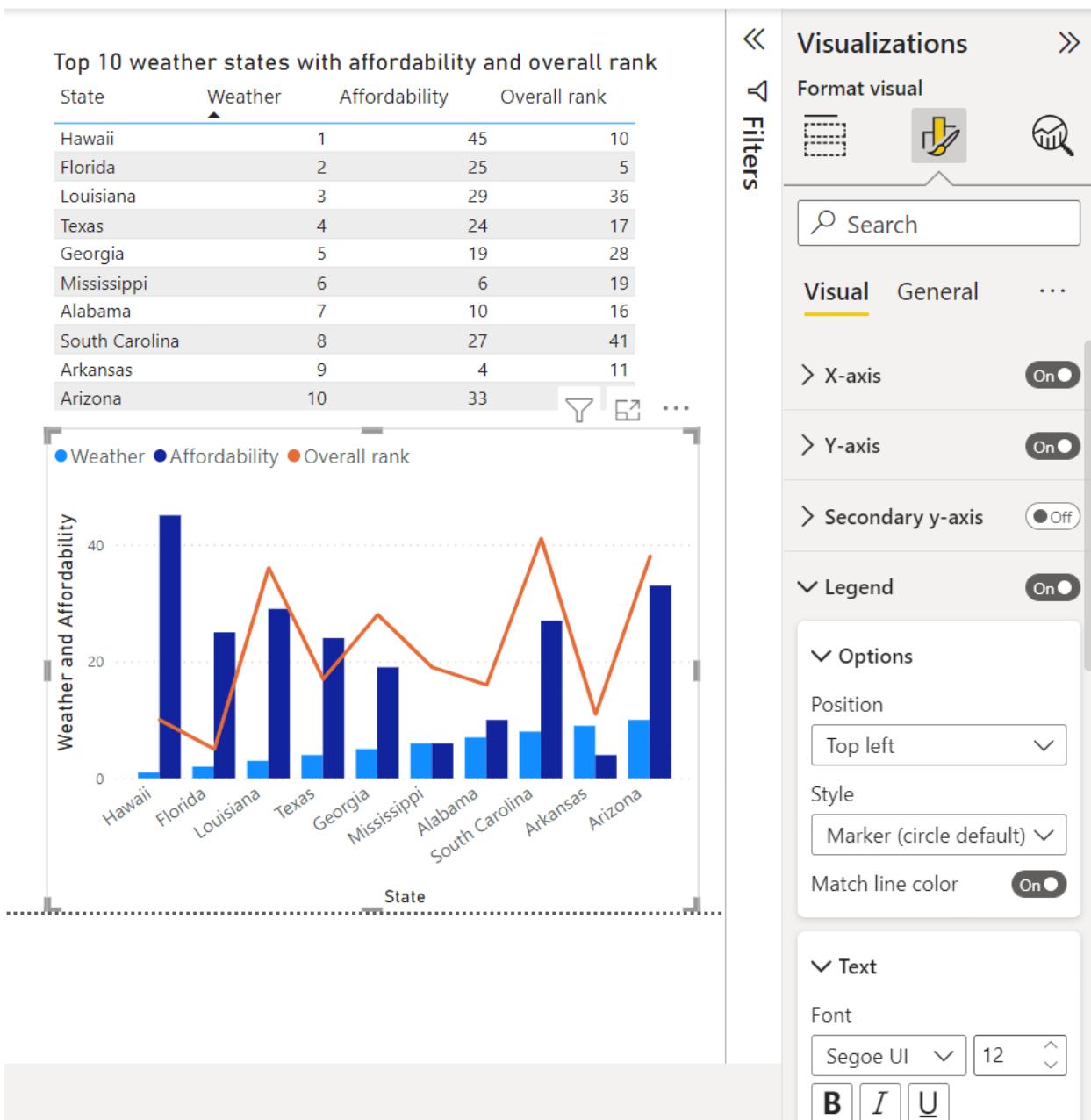
To limit the table to the top 10 states, apply the same bottom 10 filter as you did for the map visualization.

Retitle the visualization the same way as for the map visualization. Also in the **Format** section of the **Visualization pane**, change **Y axis > Axis title** from **Weather** to **Weather ranking** to make it more understandable. Then, turn the **Y axis** selector to **Off**. Search for **Zoom slider** and set it to **On**, and turn **Data labels** to **On**.

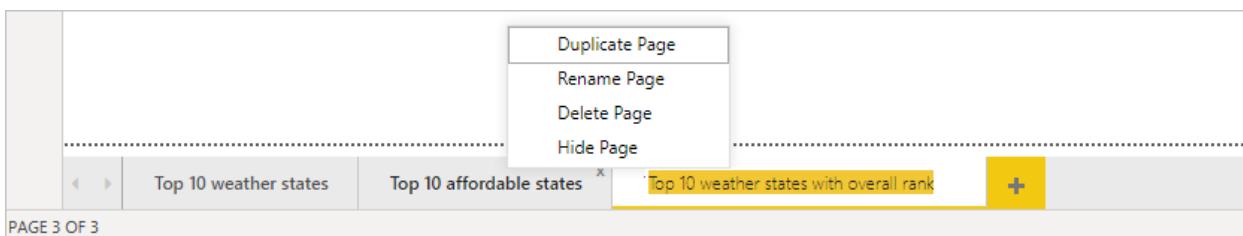
Now, the top 10 weather states appear in ranked order along with their numerical rankings.



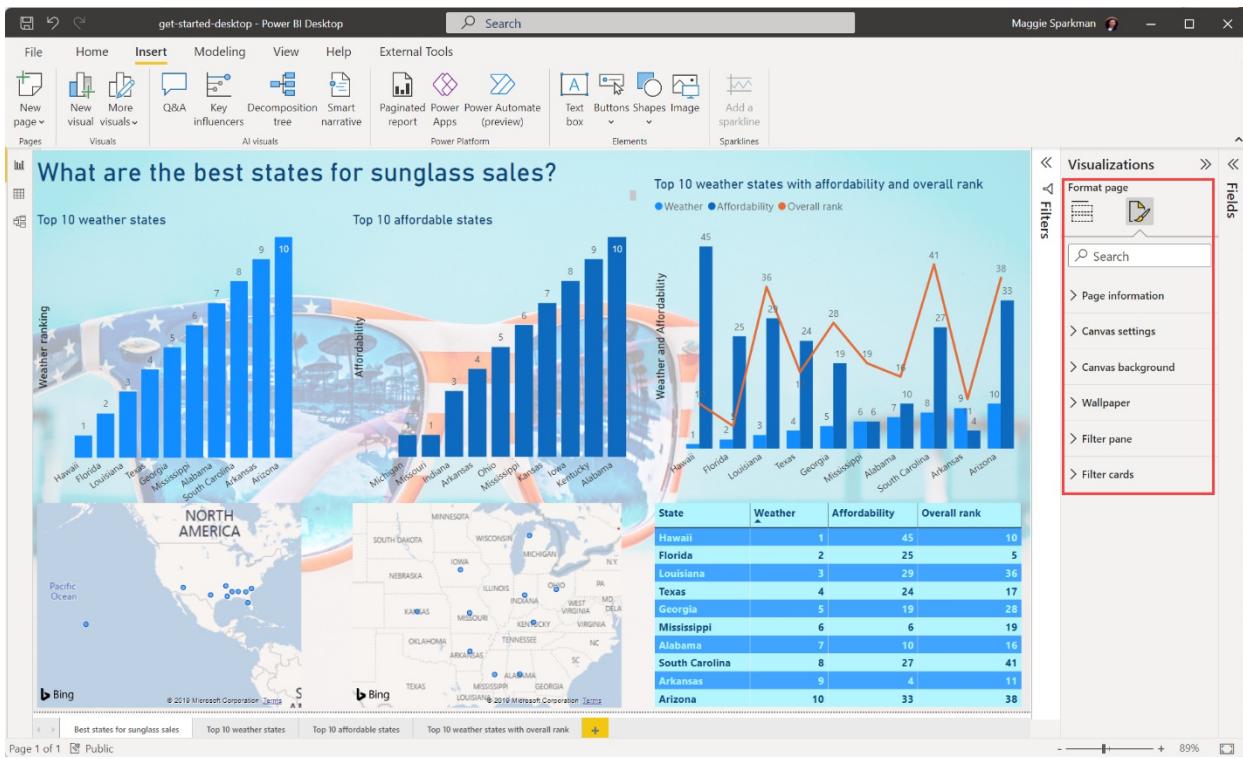
You can make similar or other visualizations for the **Affordability** and **Overall ranking** fields, or combine several fields into one visualization. There are all sorts of interesting reports and visualizations you can create. These **Table** and **Line and clustered column chart** visualizations shows the top 10 weather states along with their affordability and overall rankings:



You can show different visualizations on different report pages. To add a new page, select the + symbol next to the existing pages on the pages bar, or select **Insert > New Page** in the **Home** tab of the ribbon. To rename a page, double-click the page name in the pages bar, or right-click it and select **Rename Page**, and then type the new name. To go to a different page of the report, select the page from the pages bar.



You can add text boxes, images, and buttons to your report pages from the **Insert** group of the **Home** tab. To set formatting options for visualizations, select a visualization and then select the **Format** icon in the **Visualizations** pane. To configure page sizes, backgrounds, and other page information, select the **Format** icon with no visualization selected.



When you finish creating your pages and visualizations, select **File > Save** and save your report. For more information about reports, see [Report View in Power BI Desktop](#).

## Share your work

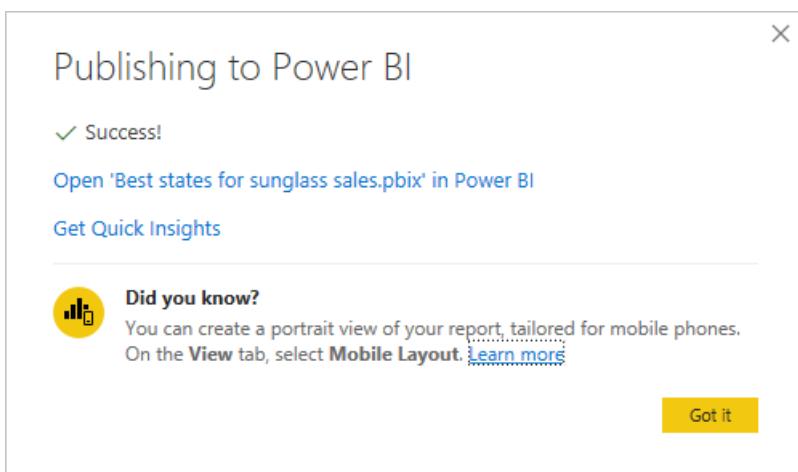
Now that you have a Power BI Desktop report, you can share it with others. There are a few ways to share your work. You can distribute the report .pbix file like any other file, you can upload the .pbix file from the Power BI service, or you can publish directly from Power BI Desktop to the Power BI service. You must have a Power BI account to be able to publish or upload reports to Power BI service.

To publish to the Power BI service from Power BI Desktop, from the **Home** tab of the ribbon, select **Publish**.



You may be prompted to sign in to Power BI, or to select a destination.

When the publish process is complete, you see the following dialog:



When you select the link to open the report in Power BI, your report opens in your Power BI site under **My**

## workspace > Reports.

Another way to share your work is to load it from within the **Power BI** service. Go to <https://app.powerbi.com> to open Power BI in a browser. On your Power BI Home page, select **Get data** at lower left to start the process of loading your Power BI Desktop report.

The screenshot shows the Power BI Home page. On the left is a navigation menu with options like Home, Favorites, Recent, Create, Datasets, Apps, Shared with me, Discover, Learn, Workspaces, and My workspace. The 'Get data' option under Workspaces is highlighted with a red box. The main area displays a greeting 'Good afternoon, MOD', a 'New report' button, and sections for 'Favorites + frequent' items (My workspace, Sales and Marketing Sample PBIX) and 'Data stories from the Power BI community'. At the bottom, there's a preview of a 'Analytics Dashboard' with filters for 'INCIDENCES & MORTALITIES' and 'USA CANCER'.

On the next page, select **Get** from the **Files** section.

The screenshot shows the 'Get Data' page. It features a central heading 'Get Data' and a sub-instruction 'Download Power BI Desktop for the best report-building experience'. Below this, there are two main sections: 'Discover content' and 'Create new content'. Under 'Discover content', there are two options: 'My organization' (Discover apps published by other people) and 'Services' (Choose apps from online services). Under 'Create new content', there are three options: 'Files' (Bring in your reports, workbooks, or data from Excel, Power BI Desktop or CSV files), 'Databases' (Use Power BI Desktop to connect to data in Azure SQL Database and more), and 'Samples' (Build on existing datasets). Each 'Get' button has a red box around it, except for the 'Get' button under 'Files' which is highlighted with a red box.

On the next page, select **Local File**. Browse to and select your Power BI Desktop .pbix file, and select **Open**.

After the file imports, you can see it listed under **My workspace > Reports** in the left pane of the Power BI service.

Power BI My workspace Best states for sunglass ... | Data updated 4/13/21

Pages

- Home
- Favorites
- Recent
- Create
- Datasets
- Apps
- Shared with me
- Discover
- Learn

Workspaces

My workspace

Reports

Best states for sun...

Customer Profitabi...

Human Resources ...

Procurement Analy...

Retail Analysis Sam...

Sales and Marketin...

## Top 10 weather states

Rank	State
1	Hawaii
2	Florida
3	Louisiana
4	Texas
5	Georgia
6	Mississippi
7	Alabama
8	South Carolina
9	Arkansas
10	Arizona

## Top 10 weather states

UNITED STATES  
MEXICO  
Gulf of Mexico  
GUATEMALA NICARAGUA

Bing © 2021 TomTom, © 2021 Microsoft Corporation [Terms](#)

When you select the file, the first page of the report appears. You can select different pages from the tabs at the left of the report.

You can make changes to a report in the Power BI service by selecting **More options > Edit** from the top of the report canvas.

Power BI My workspace Best states for sunglass ... | Data updated 4/13/21

Pages

- Home
- Favorites
- Recent
- Create
- Datasets
- Apps
- Shared with me
- Discover
- Learn

Top 10 weather states

Top 10 affordable states

Top 10 weather states ...

## Top 10 weather states

Rank	State
1	Hawaii
2	Florida
3	Louisiana
4	Texas
5	Georgia
6	Mississippi
7	Alabama
8	South Carolina
9	Arkansas
10	Arizona

...

- Subscribe
- Edit**
- See related content
- Open lineage view
- Open usage metrics
- Pin to a dashboard

To save your changes, select **File > Save a copy**.

The screenshot shows the Power BI service interface. On the left is a navigation sidebar with options like Home, Favorites, Recent, Create, Datasets, Apps, Shared with me, Discover, and Learn. The main area displays a bar chart titled 'Top 10 weather states' with the following data:

State	Rank
Hawaii	1
Florida	2
Louisiana	3
Texas	4
Georgia	5
Mississippi	6
Alabama	7
South Carolina	8
Arkansas	9
Arizona	10

The 'File' menu is open at the top, with the 'Save a copy' option highlighted.

There are all sorts of interesting visuals you can create from your report in the **Power BI** service, which you can pin to a *dashboard*. To learn about dashboards in the **Power BI** service, see [Tips for designing a great dashboard](#). For more information about creating, sharing, and modifying dashboards, see [Share a dashboard](#).

To share a report or dashboard, select **Share > Report** at the top of the open report or dashboard page, or select the **Share** icon next to the report or dashboard name in the **My workspace > Reports** or **My workspace > Dashboards** lists.

Complete the **Share report** or **Share dashboard** screen to send an email or get a link to share your report or dashboard with others.

The screenshot shows the 'Share report' dialog for the 'Top 10 weather states' report. The 'Report' tab is selected. The dialog includes fields for 'Share' and 'Access' (which is currently selected). It also includes a note: 'Recipients will have the same access as you unless row-level security on the dataset further restricts them.' Below this are sections for 'Grant access to' (with fields for 'Enter email addresses' and 'Include an optional message...'), and a list of checkboxes for sharing options:

- Allow recipients to share your report
- Allow recipients to build new content using the underlying datasets
- Send an email notification to recipients
- Include my changes

At the bottom, there is a 'Report link' field with the URL <https://app.powerbi.com/groups/me/reports/e0a0e045-1f75-46a2-9813-a6bcba6>, and 'Share' and 'Cancel' buttons.

There are many compelling data-related mash-ups and visualizations you can do with Power BI Desktop and the Power BI service.

## Considerations and limitations

- Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported. If you contact support for Power BI Desktop, you'll be asked to upgrade to the most recent version.

- For data and reporting that must remain on-premises, there's a separate and specialized version of Power BI called [Power BI Report Server](#). Power BI Report Server uses a separate and specialized version of Power BI Desktop called [Power BI Desktop for Power BI Report Server](#), which updates three times a year. This article describes standard Power BI Desktop.

## Next steps

Power BI Desktop supports connecting to a diagnostics port. The diagnostics port allows other tools to connect to and perform traces for diagnostic purposes. When you're using the diagnostics port, *making any changes to the model isn't supported. Changes to the model may lead to corruption and data loss.*

For more information on the many capabilities of Power BI Desktop, check out the following resources:

- [Query overview in Power BI Desktop](#)
- [Data sources in Power BI Desktop](#)
- [Connect to data in Power BI Desktop](#)
- [Tutorial: Shape and combine data with Power BI Desktop](#)
- [Common query tasks in Power BI Desktop](#)

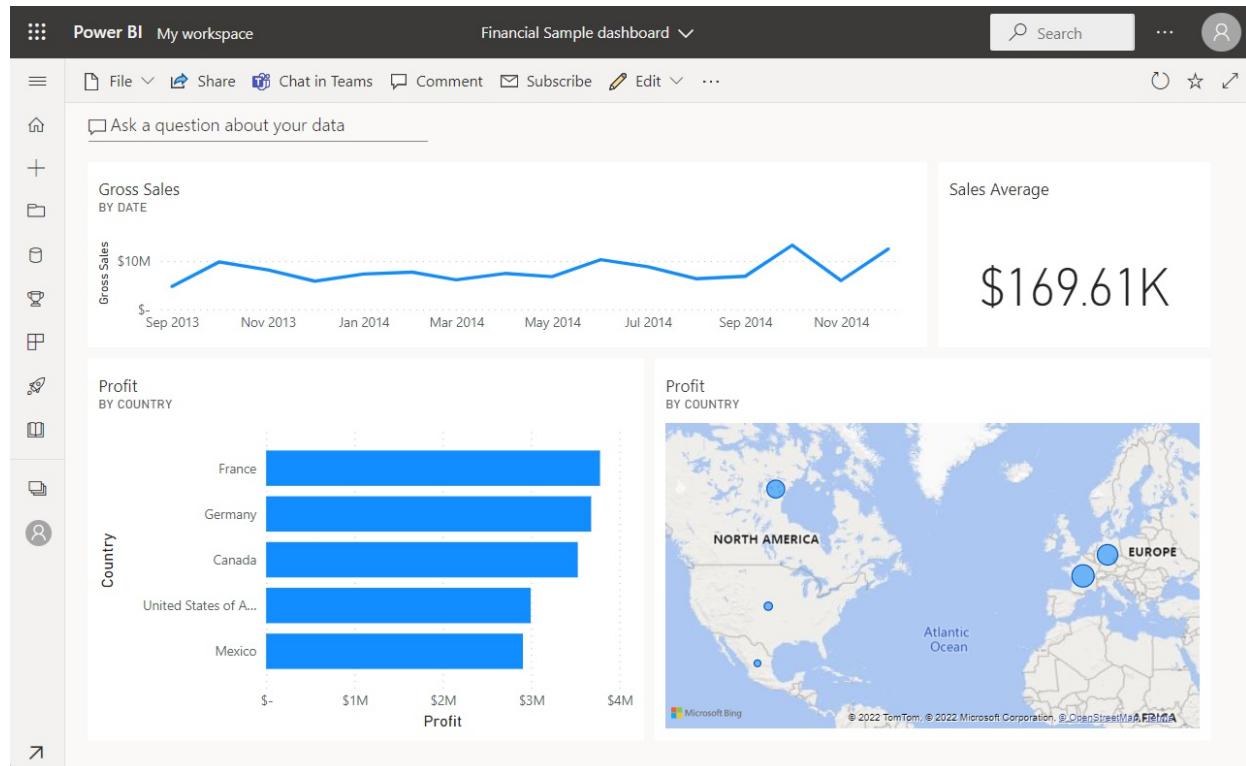
# Tutorial: Get started creating in the Power BI service

12/15/2022 • 7 minutes to read • [Edit Online](#)

APPLIES TO:  Power BI Desktop  Power BI service

This tutorial is an introduction to some of the features of the *Power BI service*. In it, you connect to data, create a report and a dashboard, and ask questions of your data. You can do much more in the Power BI service; this tutorial is just to whet your appetite. For an understanding of how the Power BI service fits in with the other Power BI offerings, we recommend reading [What is Power BI](#).

Are you a report *reader* rather than a creator? [Getting around in the Power BI service](#) is a good starting place for you.

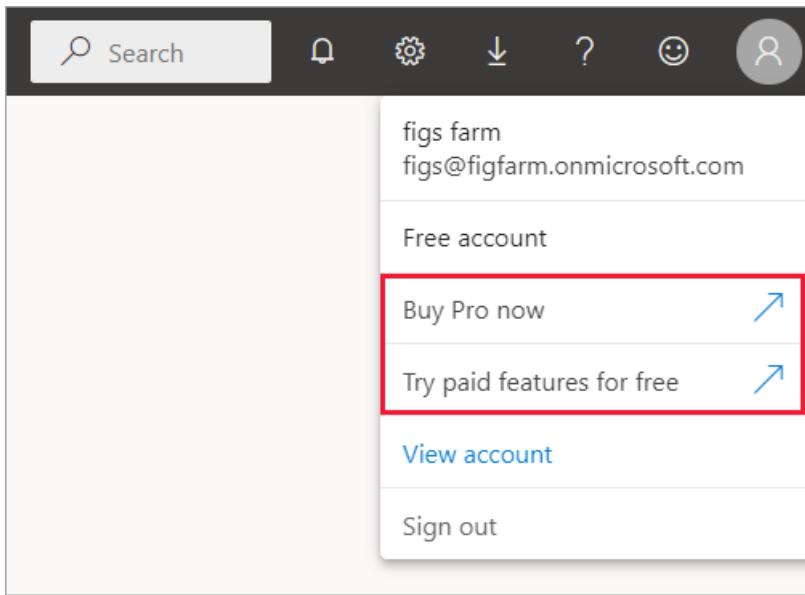


In this tutorial, you complete the following steps:

- Sign in to your Power BI online account, or sign up, if you don't have an account yet.
- Open the Power BI service.
- Get some data and open it in report view.
- Use that data to create visualizations and save it as a report.
- Create a dashboard by pinning tiles from the report.
- Add other visualizations to your dashboard by using the Q&A natural-language tool.
- Resize, rearrange, and edit details for the tiles on the dashboard.
- Clean up resources by deleting the dataset, report, and dashboard.

## Sign up for the Power BI service

You need a Power BI Pro or Premium Per User (PPU) license to create content in Power BI. If you don't have a Power BI account, and plan on creating content, [sign up for a free Power BI Premium Per User 60 day trial](#) before you begin. Complete the wizard to get a free license, open the Power BI service ([app.powerbi.com](http://app.powerbi.com)), select the **Me** icon and choose either **Buy Pro now** or **Try paid features for free**.



## Step 1: Get data

Often, when you want to create a Power BI report, you start in Power BI Desktop. Power BI Desktop offers more power. You can transform, shape, and model data, before you start designing reports. This time though, we're going to start from scratch creating a report in the Power BI service.

In this tutorial, we get data from a simple Microsoft Excel file. Want to follow along? [Download the Financial Sample file.](#)

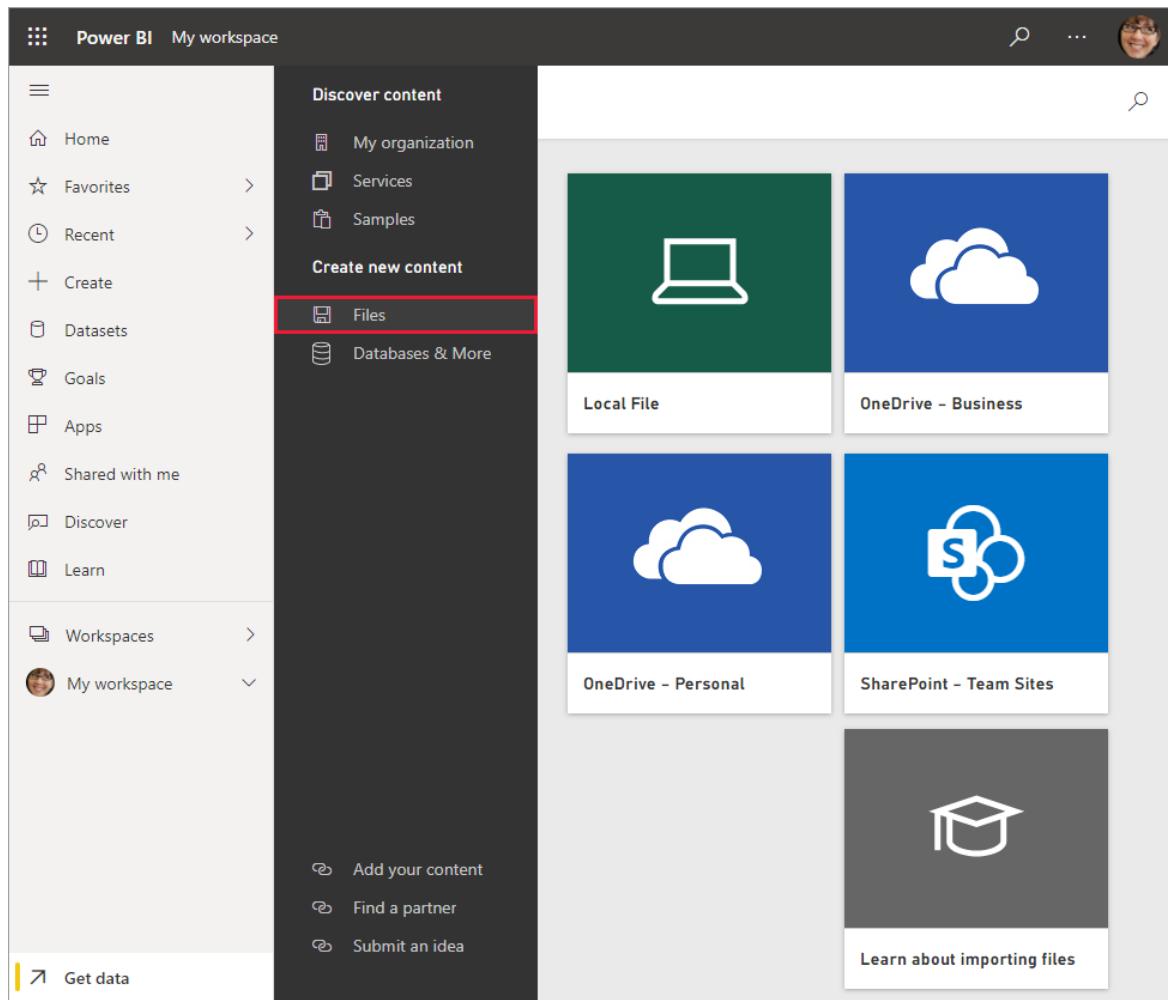
1. To begin, open the Power BI service ([app.powerbi.com](http://app.powerbi.com)) in your browser.

Don't have an account? No worries, you can [sign up for a free Power BI Premium Per User 60 day trial](#)

2. Select **My workspace** in the navigation pane.
3. In **My workspace**, select **New > Upload a file**.

The **Get Data** page opens.

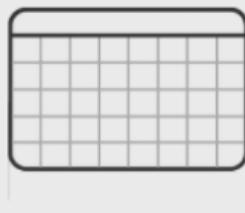
4. Under the **Create new content** section, select **Files > Local File**, then select the location where you saved the Excel file.



5. Browse to the file on your computer, and choose **Open**.
6. For this tutorial, we select **Import** to add the Excel file as a dataset, which we can then use to create reports and dashboards. If you select **Upload**, the entire Excel workbook is uploaded to Power BI, where you can open and edit it in Excel Online.

## Local File

Choose how to connect to your Excel workbook



### Import Excel data into Power BI

Connect to the data in your workbook so you can create Power BI reports and dashboards for it.

or

### Upload your Excel file to Power BI

Bring your Excel file into Power BI to view and interact with it just as you would in Excel Online. Pin ranges to dashboards.

Import ↗

Upload ↗

- When your dataset is ready, select **More options (...)** next to your Financial Sample dataset, then select **Create report** to open the report editor.

The screenshot shows the Power BI workspace interface. At the top, there's a navigation bar with 'New', 'View', 'Filters', and a search bar. Below it, a filter bar allows switching between 'All', 'Content', and 'Datasets + dataflows'. The main area displays a list of datasets. A context menu is open over the first dataset, 'Financial Sample', which is highlighted with a red box. The menu options include:

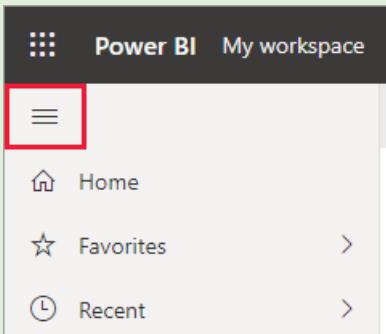
- Analyze in Excel
- Create report (highlighted with a red box)
- Create paginated report
- Delete
- Get quick insights
- Security
- Rename
- Settings
- Manage permissions
- View lineage

The report canvas is blank. We see the **Filters**, **Visualizations**, and **Fields** panes on the right.

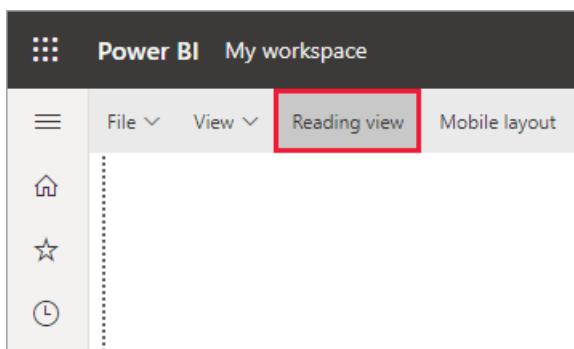
The screenshot shows the Power BI report canvas. On the left, there's a ribbon with various icons. The main area is titled 'Build visuals with your data' and contains a placeholder message: 'Select or drag fields from the Fields pane onto the report canvas.' To the right of the canvas are three large panes: 'Filters', 'Visualizations', and 'Fields'. The 'Filters' pane has sections for 'Filters on this page' and 'Filters on all pages', both with 'Add data fields here' buttons. The 'Visualizations' pane shows a grid of visualization icons. The 'Fields' pane lists fields from the 'financials' table, including COGS, Country, Date, Discounts, Gross Sales, Manufacturing P..., Month, Month Name, Month Number, Product, Profit, Sale Price, Sales, Segment, Units Sold, and Year. A 'Search' bar is at the top of each pane.

#### TIP

Select the global navigation button in the upper-left corner to collapse the navigation pane. That way your canvas has more room.



8. You're currently in Editing view. Notice the **Reading view** option in the menu bar.



While in Editing view, you can modify reports, because you're the *owner* and *creator* of the report. When you share your report with colleagues, often they can only interact with the report in Reading view. They are *consumers* of reports in your **My workspace**.

## Step 2: Create a chart in a report

Now that you've connected to data, start exploring. When you've found something interesting, you can save it on the report canvas. Then you can pin it to a dashboard to monitor it and see how it changes over time. But first things first

1. In the report editor, start in the **Fields** pane on the right side of the page to build a visualization. Select the **Gross Sales** field, then the **Date** field.

Fields >

Search

financials

- Σ COGS
- ⚙️ Country
- Date
- Discount Ba...
- Σ Discounts
- Σ Gross Sales
- Σ Manufactur...
- Month
- Month Name
- Month Nu...
- Product

Power BI analyzes the data and creates a column chart visualization.

**NOTE**

If you selected the **Date** field first instead of **Gross Sales**, you see a table. No worries! We're going to change the visualization in the next step.

Some fields have sigma symbols next to them because Power BI detected that they contain numeric values.

Σ Discounts

Σ Gross Sales

Σ Manufactur...

2. Let's switch to a different way of displaying this data. Line charts are good visuals for displaying values over time. Select the **Line chart** icon from the **Visualizations** pane.

Gross Sales by Date

\$10M  
\$5M  
\$-

Jan 2014 Jul 2014

Date

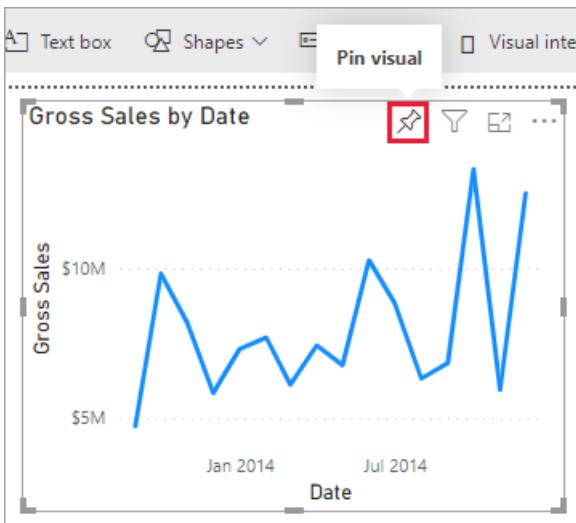
Visualizations >

Build visual

Filters

Line chart

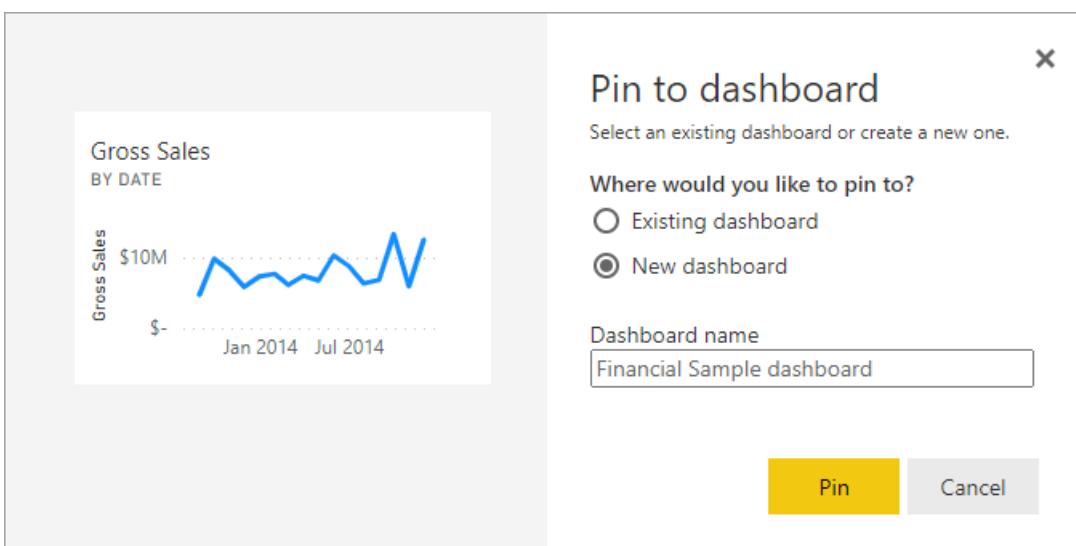
3. This chart looks interesting, so let's *pin* it to a dashboard. Hover over the visualization and select the pin icon that appears either above or below it.



- Because this report is new, you're prompted to save it before you can pin a visualization to a dashboard. Give your report a name (for example, *Financial Sample report*), then **Save**.

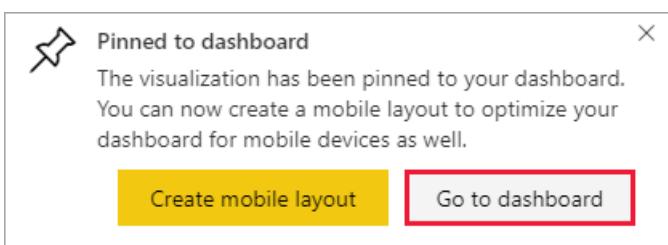
Now you're looking at the report in Reading view.

- Select the **Pin** icon again.
- Select **New dashboard** and name it *Financial Sample dashboard*, for example.

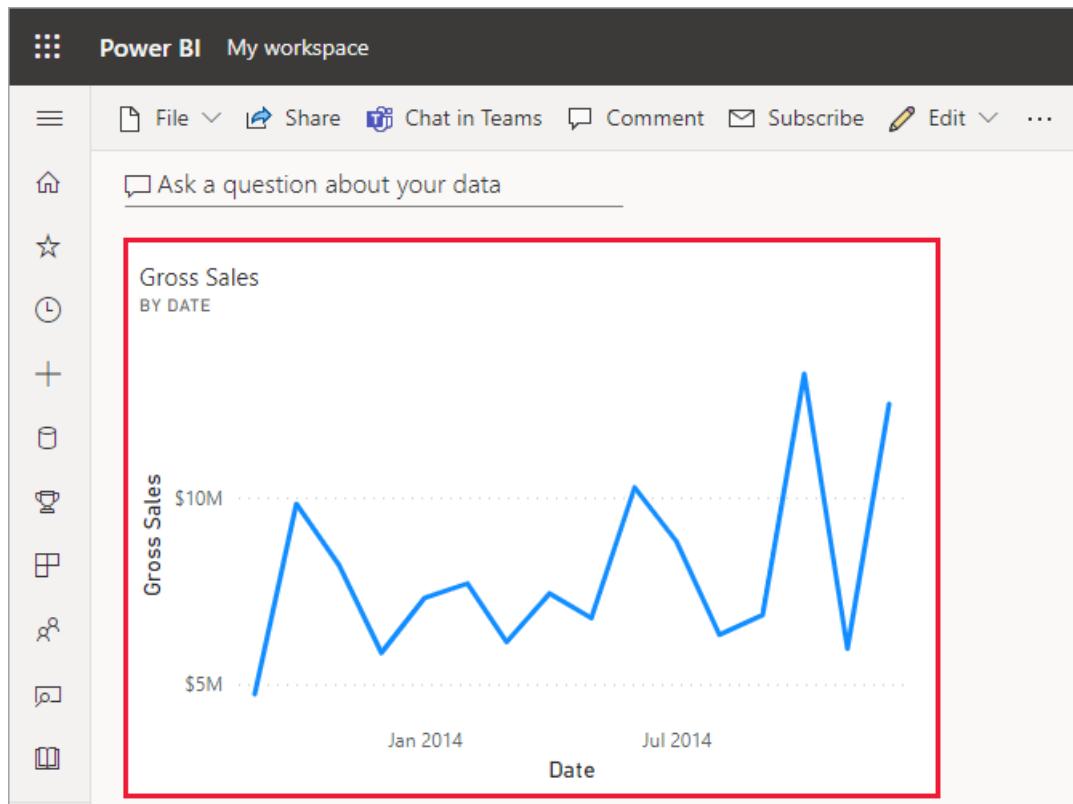


A success message (near the top-right corner) lets you know the visualization was added as a tile to your dashboard.

- Select **Go to dashboard** to see your new dashboard with the line chart that you pinned to it as a tile.

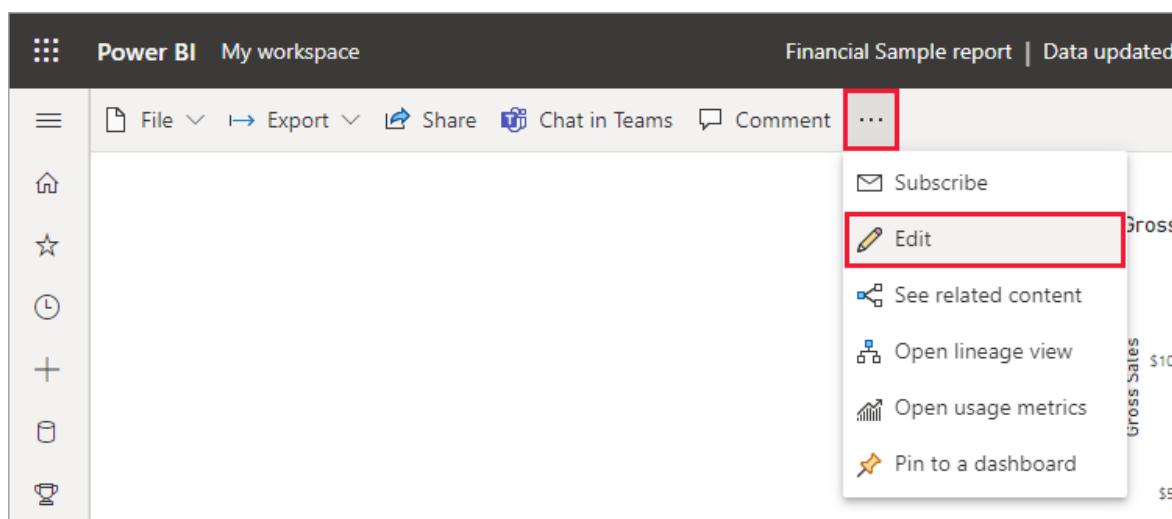


Now that you've pinned this visualization, it's stored on your dashboard. The data stays up-to-date so you can track the latest value at a glance. However, if you change the visualization type in the report, the visualization on the dashboard doesn't change.



8. Select the new tile on your dashboard. Power BI returns you to the report in Reading view.

9. To switch back to Editing view, select **More options (...)** in the menu bar > Edit.

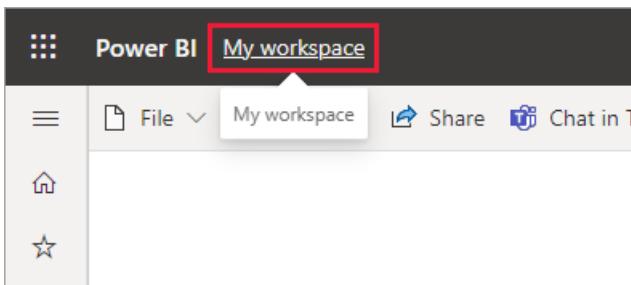


Back in Editing view, you can continue to explore and pin tiles.

### Step 3: Explore with Q&A

For a quick exploration of your data, try asking a question in the Q&A question box. Q&A lets you ask natural-language queries about your data. In a dashboard, the Q&A box is at the top (**Ask a question about your data**) under the menu bar. In a report, it's in the top menu bar (**Ask a question**).

1. To go back to the dashboard, select **My workspace** in the black Power BI header bar.



2. In My workspace, select your dashboard.

A screenshot of the Power BI desktop application showing the 'My workspace' screen. The left sidebar has icons for Home, Recent, and Favorites. The main area shows a list of items under 'All'. The first item is 'Financial Sample' (Dataset). The second item, 'Financial Sample dashboard', is highlighted with a red box. The third item is 'Financial Sample report' (Report). Each item has a preview icon, a name, a type, and a more options menu.

3. Select Ask a question about your data. Q&A automatically offers a number of suggestions.

A screenshot of the Power BI Q&amp;A interface. The top navigation bar shows 'Power BI My workspace' and the current item 'Financial Sample dashboard'. The main area has a search bar and a 'Show all suggestions' link. Below the search bar is a list of suggested questions: 'maximum cog', 'total cog over time', 'total discount by year', 'financials sorted by sale', 'financials sorted by month', and 'how many products are there'. Each suggestion has a small icon and a 'Show all suggestions' link at the bottom right.

4. Some suggestions return a single value. For example, select what is the average sale.

Q&A searches for an answer and presents it in the form of a card visualization.

5. Select Pin visual and pin this visualization to the Financial Sample dashboard.

Power BI My workspace Financial Sample dashb... Pin visual

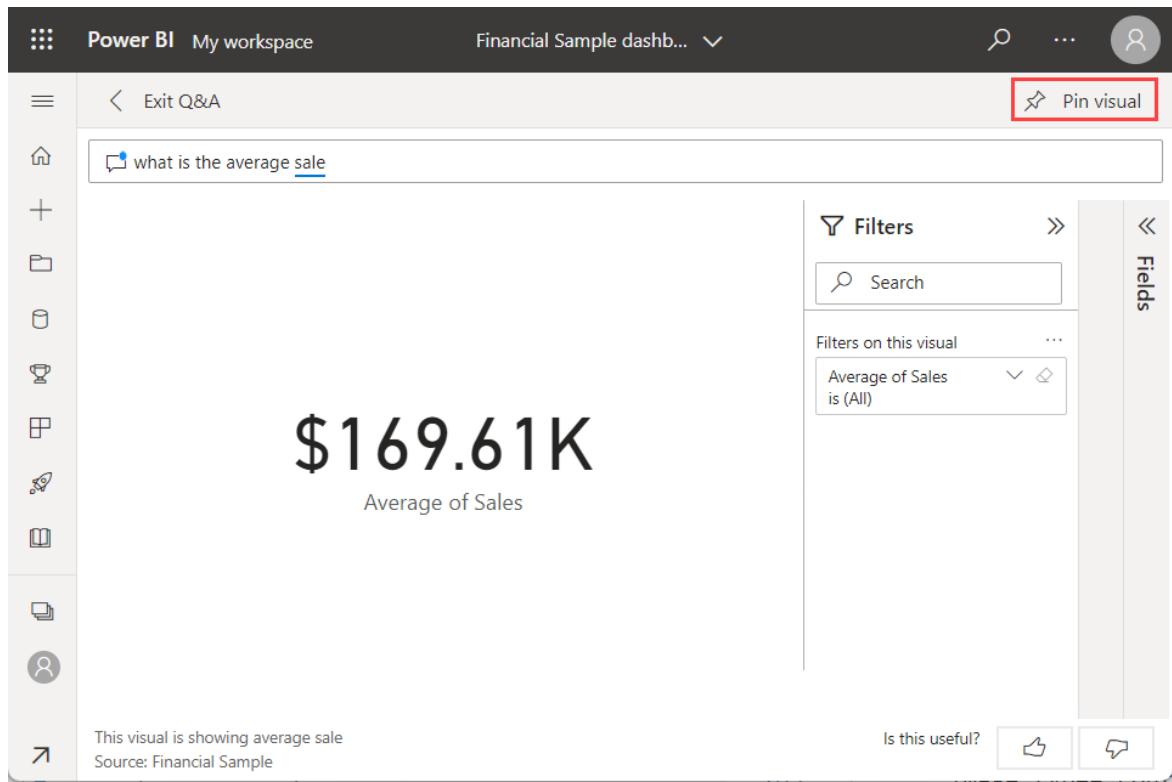
what is the average sale

\$169.61K

Average of Sales

This visual is showing average sale  
Source: Financial Sample

Is this useful?  



6. Go back to Q&A and type *total profit by country*.

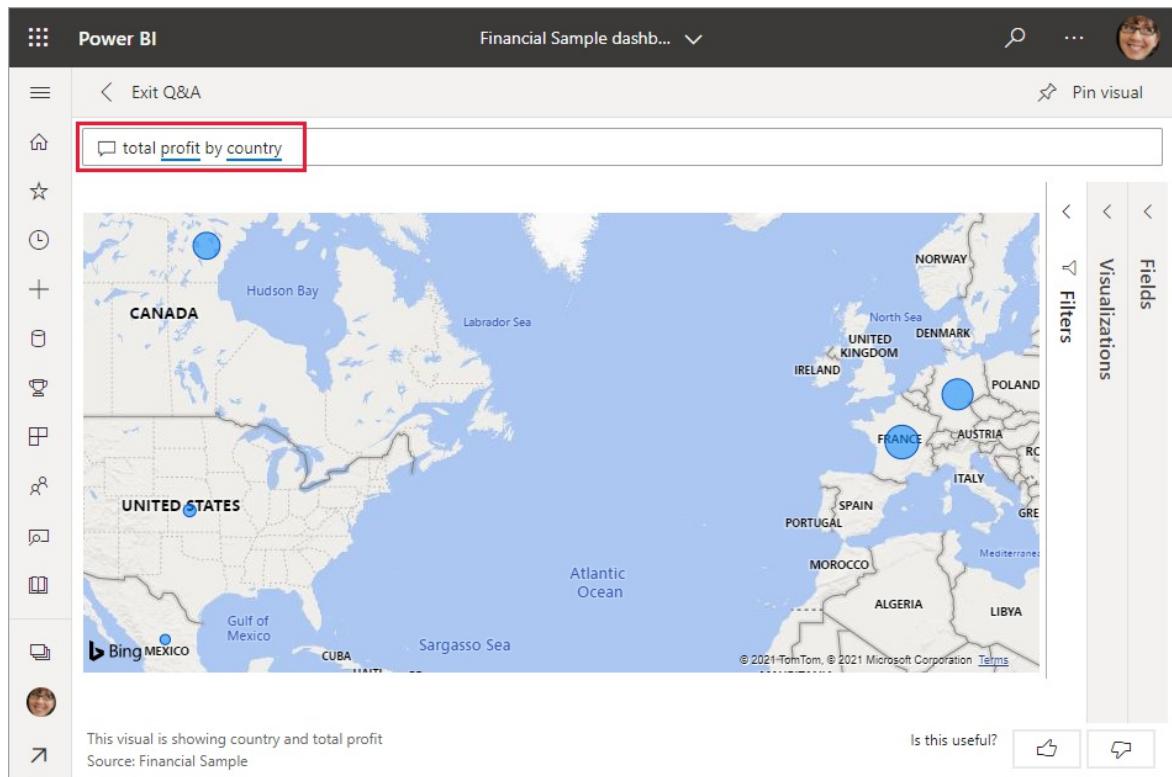
Power BI Financial Sample dashb... Pin visual

total profit by country



This visual is showing country and total profit  
Source: Financial Sample

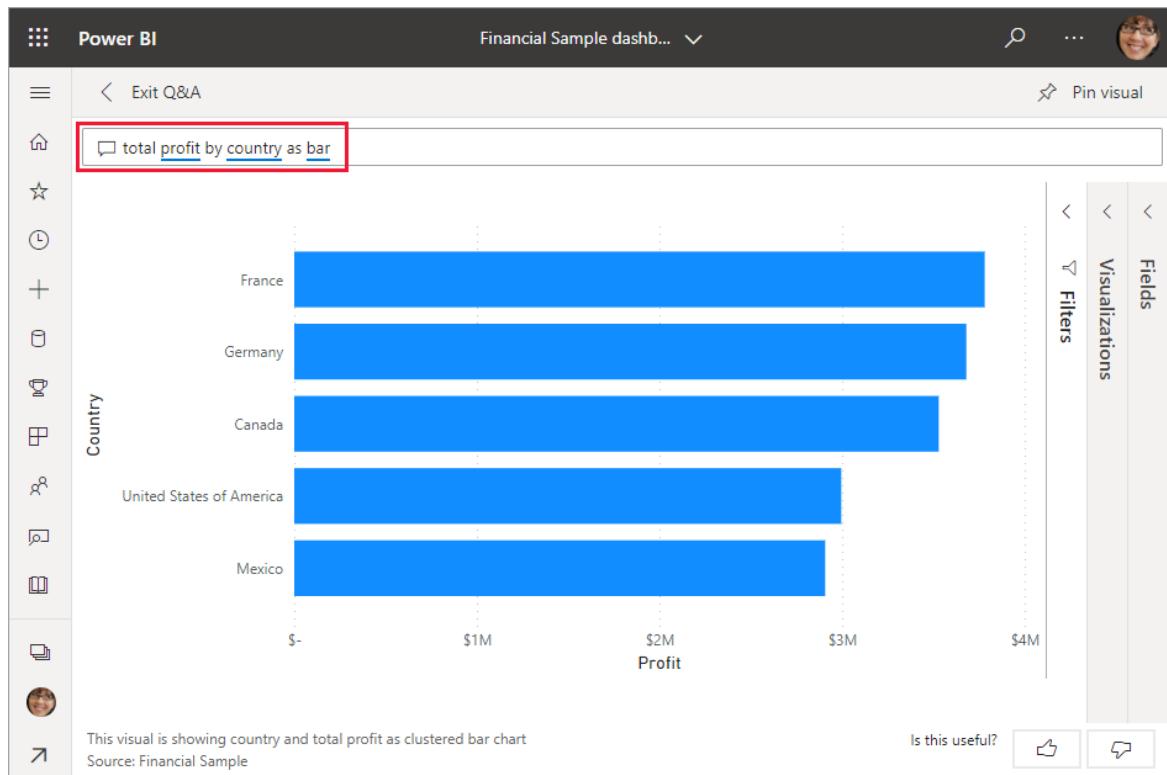
Is this useful?  



7. Pin the map to the Financial Sample dashboard, too.

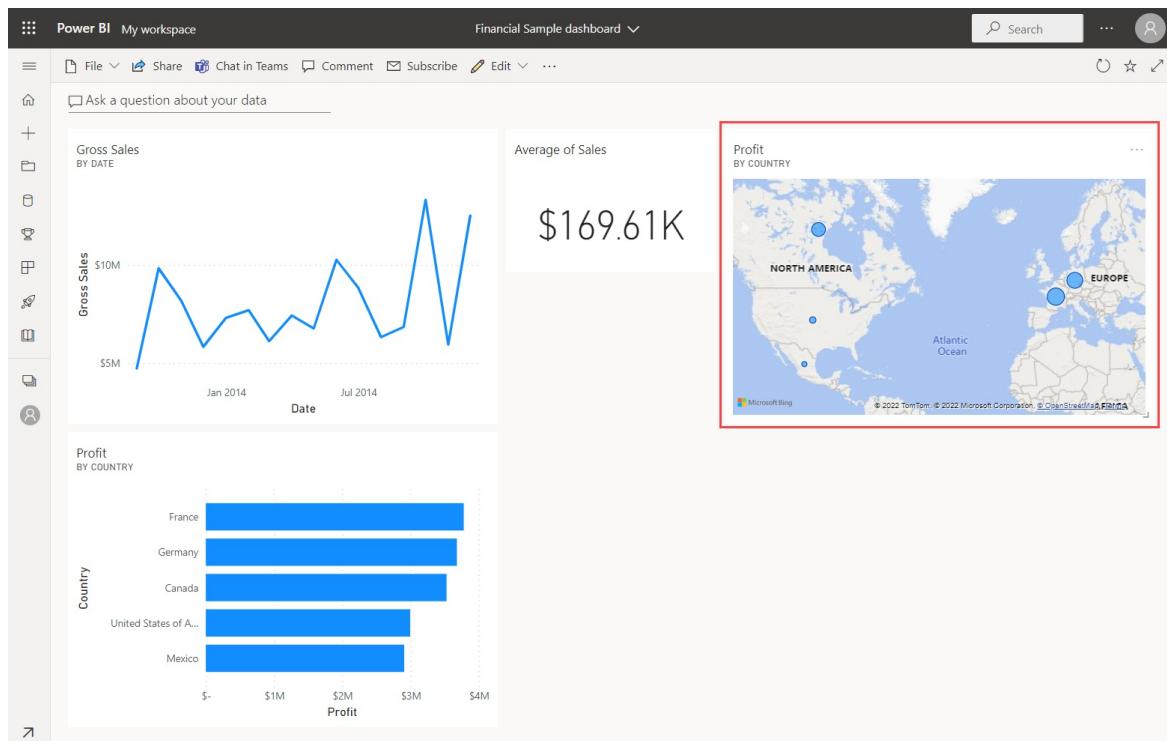
8. On the dashboard, select the map you just pinned. See how it opens Q&A again?

9. Place the cursor after *by country* in the Q&A box and type *as bar*. Power BI creates a bar chart with the results.



10. Pin the bar chart to your Financial Sample dashboard, too.
11. Select Exit Q&A to return to your dashboard, where you see the new tiles you created.

You see that even though you changed the map to a bar chart in Q&A, that tile remained a map because it was a map when you pinned it.



## Step 4: Reposition tiles

We can rearrange the tiles to make better use of the dashboard space.

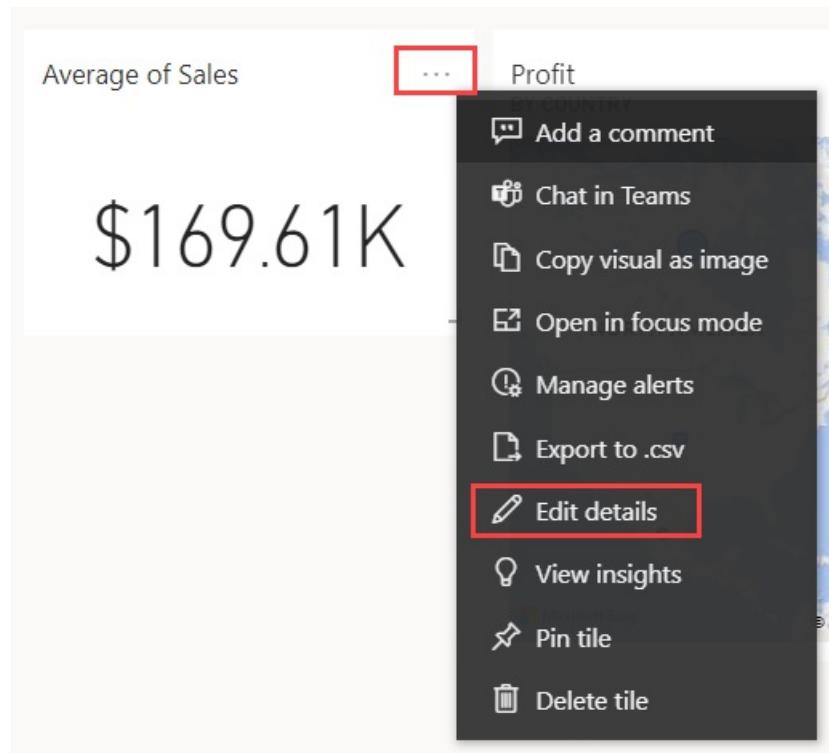
1. Drag the lower-right corner of the *Gross Sales* line chart tile upward, until it snaps at the same height as the *Average of Sales* tile, then release it.

Ask a question about your data



Now the two tiles are the same height.

2. Select **More options (...)** for the Average of Sales tile > **Edit details**.



3. In the **Title** box, type *Sales Average* > **Apply**.

## Tile details

\* Required

### Details

Display title and subtitle

#### Title

Sales Average

#### Subtitle

### Functionality

Display last refresh time

Set custom link

#### Link type

External link

Link to a dashboard or report in the current workspace

#### URL \*

Open custom link in the same tab?

[Restore default](#)

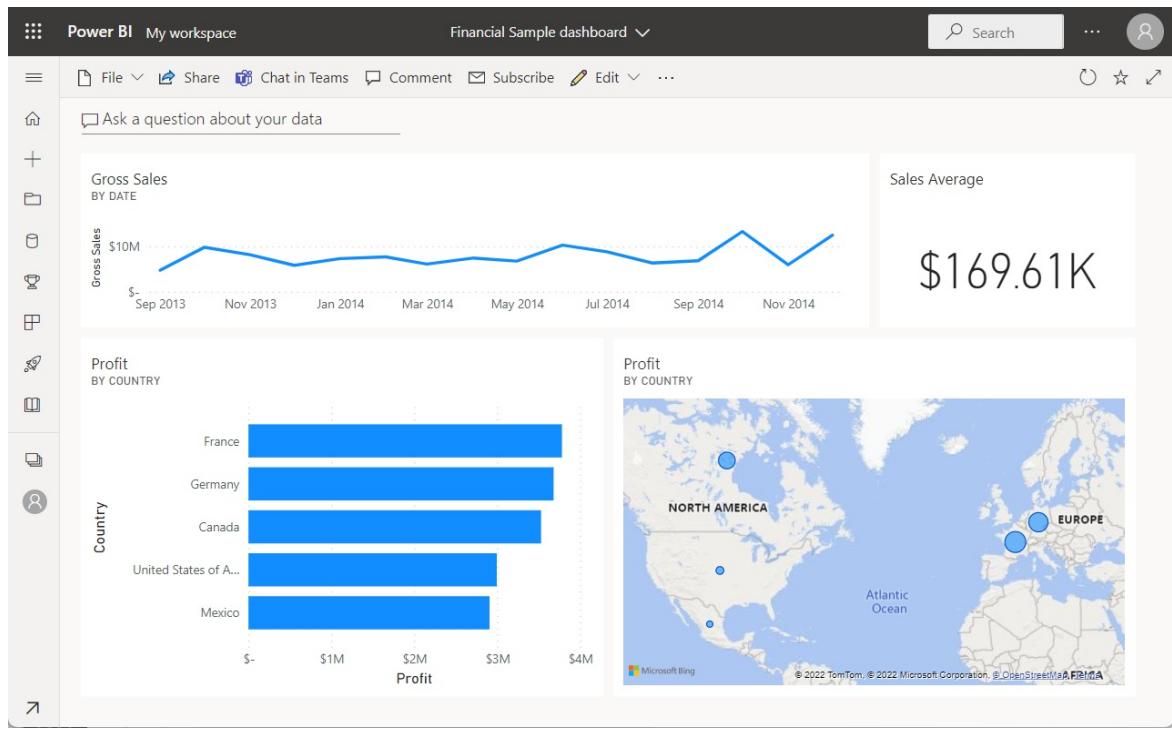
[Technical Details](#)

Apply

Cancel

4. Rearrange the other visuals to fit together.

That looks better.



## Clean up resources

Now that you've finished the tutorial, you can delete the dataset, report, and dashboard.

1. Select **My workspace** in the black Power BI header bar.
2. Select **More options (...)** next to the Financial Sample dataset > **Delete**.

Name	Type
Financial Sample	Dataset
Financial Sample dashboard	Analyze in Excel
Financial Sample report	Create report
Financial Sample.xlsx	Delete
Sales and Marketing Sample	Get quick insights

You see a warning that **All reports and dashboard tiles containing data from this dataset will also be deleted.**

3. Select **Delete**.

## Next steps

[Quickly create a report by pasting data into the Power BI service](#)

Explore these training resources for Power BI:

[Learn Power BI](#)

[Become a Power BI data analyst](#)

# What's new in Power BI?

12/15/2022 • 2 minutes to read • [Edit Online](#)

## December 2022 Update (2.112.283.0)

December's updates are a sleigh ride of fun, making us want to go door-to-door and sing about our new and updated features. May your data analytics always be cheery and bright.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

### IMPORTANT

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

### IMPORTANT

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

#### Reporting

- Slicer type formatting moved to Format Pane [\[video\]](#) [\[blog\]](#)

#### Modeling

- Making it easier to do comparison calculations [\[video\]](#) [\[blog\]](#) [\[article\]](#)

#### Data connectivity

- Many updated data connectors [\[video\]](#) [\[blog\]](#)

**NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

## Visuals

- New visuals in AppSource [\[video\]](#) [\[blog\]](#)

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

### Power BI monthly update video

The following video describes each of these updates. You can also watch this video from the blog post.

**NOTE**

The video might use earlier versions of Power BI Desktop or the Power BI service.

## More videos

Like learning about Power BI through videos and other engaging content? Check out the following collection of video sources and content:

- [Power BI channel](#): a collection of Power BI videos on YouTube.
- [Microsoft Learn training for Power BI](#): a sequential learning tour of Power BI, in bite-size pieces.

## Updates for previous months

Looking for Power BI updates for previous months? You can find them in the [Power BI monthly updates archive](#).

# Updates to the experience in the Power BI service

12/15/2022 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:** ✗ Power BI Desktop ✓ Power BI service

This article spells out the changes that are coming to the Power BI service, and maps the old experience to the new experience.

## NOTE

These features are currently under experimentation. Some customers may not see them yet. We'd love to hear your feedback at [Power BI Ideas](#).

Here's an overview of the changes:

**Browse changes** The left navigation links for **Recent**, **Favorites**, and **Shared with me** full page lists are being combined in a new **Browse** tab. You can still search and filter these lists, and now you can even filter by keyword.

**Left navigation changes** A major change coming to the left navigation pane is tooltips. Before, to see what an icon represented in the left navigation pane, you had to expand the entire menu.

**Workspace flyout menu changes** The **My Workspace** link moves below the **Search** box in the workspace flyout menu.

**Get Data changes** The Get Data experience moves from the bottom of the left navigation pane to the **Create** tab.

## Browse changes

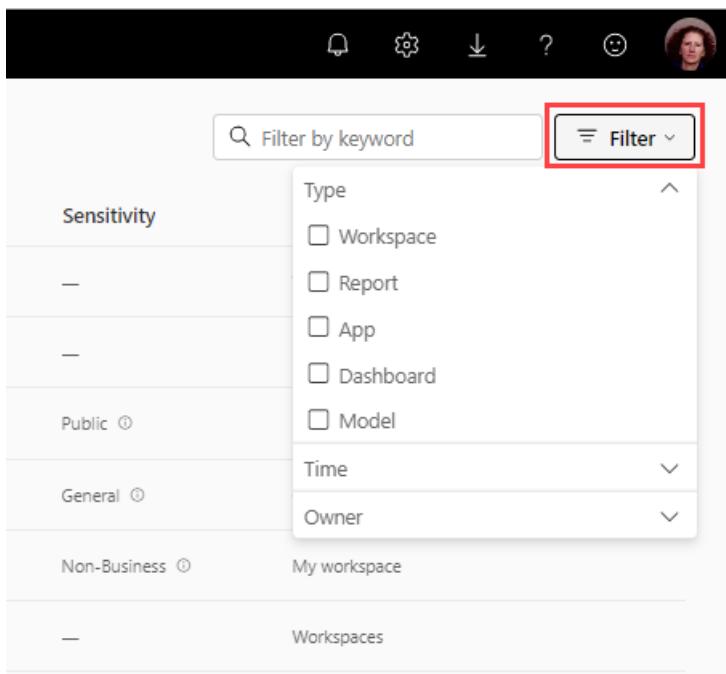
Introducing the **Browse** page:

	Name	Type
New Retail Analysis	Retail Analysis Sample	Report
get-started-desktop-best-worst-states-urls-better-...	Content Engagement Report	Report
Artificial Intelligence Sample	Artificial Intelligence Sample	Report
My workspace	My workspace	Workspace

**Browse** simplifies the left navigation. It includes as a sub-navigation all the lists that were previously available individually: **Recent**, **Favorites**, and **Shared with me**.

## Improved filtering

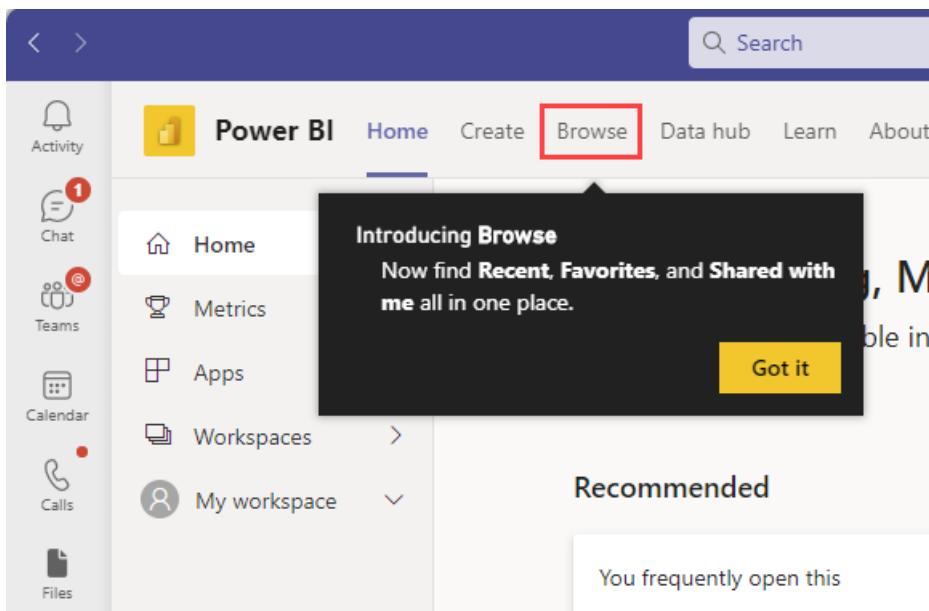
It's easier to find content in these lists with a new experience for filtering by keyword and improved filtering by content type, time, and endorsement.



The screenshot shows the Power BI navigation pane. At the top right, there is a search bar labeled "Filter by keyword" and a button labeled "Filter" with a dropdown arrow, which is highlighted with a red box. Below this, there are several sections: "Sensitivity" (with options like "Public", "General", and "Non-Business"), "Type" (with checkboxes for "Workspace", "Report", "App", "Dashboard", and "Model"), "Time" (dropdown), and "Owner" (dropdown). At the bottom, there are links for "My workspace" and "Workspaces".

Any browser bookmarks you made for the **Recent**, **Favorites**, and **Shared with me** pages will now take you to the new **Browse** view for each.

The Browse page will also be available in the Power BI personal app for Microsoft Teams.

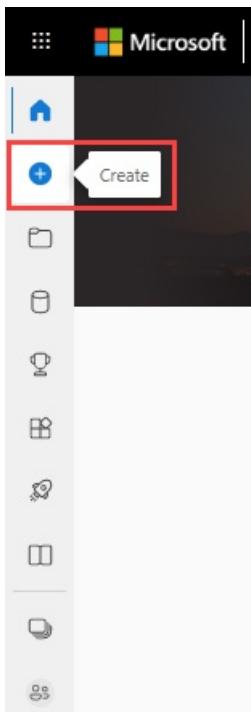


The screenshot shows the Power BI app for Microsoft Teams. The top navigation bar includes "Home", "Create", "Browse" (which is highlighted with a red box), "Data hub", "Learn", and "About". On the left, there is a navigation pane with icons for "Activity", "Chat" (with a red notification badge), "Teams", "Calendar", "Calls", and "Files". A tooltip box is overlaid on the screen, titled "Introducing Browse" with the subtext "Now find **Recent**, **Favorites**, and **Shared with me** all in one place." At the bottom right of the tooltip is a yellow "Got it" button.

Don't have the Power BI app for Teams yet? Get the [Power BI app for Microsoft Teams](#).

## Navigation pane changes

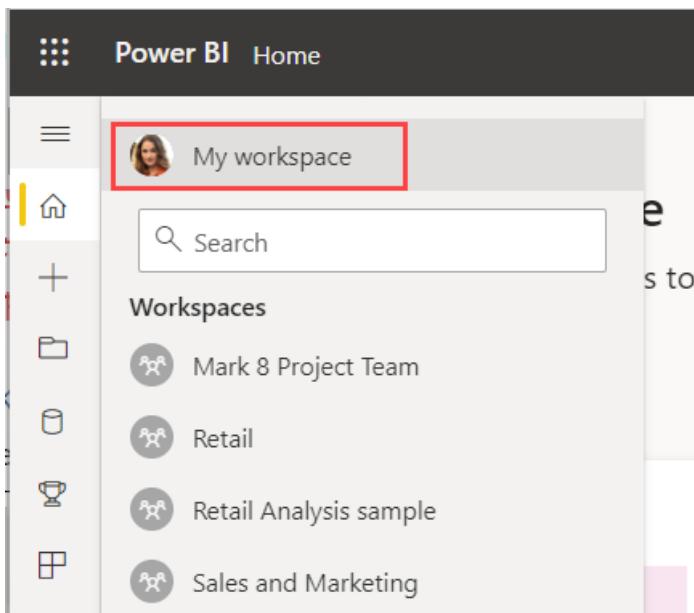
The left navigation pane will feature tooltips to explain what the icons represent. You see the tooltips by hovering over the icon in the nav pane. With the new update, the left nav no longer expands. Instead, you hover over any icon and a tooltip appears.



We're also updating the way item navigation occurs. Previously, you could navigate between items through the expanded left nav pane workspace dropdown. Because the updated left nav pane is permanently collapsed, this flow goes away. You can still navigate between items by selecting the workspace icon, then selecting the relevant item from your workspace page.

## Workspace menu flyout changes

In the previous workspace flyout, **My Workspace** was above the **Search** box.



It's shifting to below the **Search** box in the workspace flyout.

The screenshot shows the Microsoft Power BI Home interface. At the top, there's a navigation bar with icons for three dots, Microsoft logo, Power BI, and Home. To the right is a search bar with a magnifying glass icon and the word 'Search'. Below the navigation bar is a sidebar titled 'Workspaces' with a search bar. The main area lists several workspaces: 'My workspace' (highlighted with a red box), 'Sales & Returns sample', 'Sales and Marketing feb 2021', 'Sales and Marketing sample 13', 'Sales and Marketing sample 86', 'Sales Marketing built-in', 'Sales Marketing Nov 2019', and 'Sample Excel files'. Each workspace entry includes a small thumbnail icon and a gear icon for settings.

## Get Data changes

Get data is moving from the left navigation pane to the Create tab. Previously, to access Get data, you selected the icon at the bottom of the nav pane.

The screenshot shows the Microsoft Power BI Home interface with a different navigation pane. The top bar has the Microsoft logo, Power BI, and Home. The navigation pane on the left includes 'Home' (selected), 'Create' (highlighted with a yellow bar), 'Browse', 'Data hub', 'Metrics', 'Apps', 'Deployment pipelines', 'Learn', 'Workspaces' (with a dropdown arrow), and 'My workspace' (with a dropdown arrow). At the bottom of the navigation pane, the 'Get data' option is highlighted with a red box.

Now the Get data experience is moving to the Create experience. You access it by selecting **Create > Report > these options**, and then you're on the Get Data page.

Microsoft | Power BI New Retail Analysis Search ...

Building your first report

- Add and prepare your data
- Auto-create a prefab report
- Personalize it to suit your needs

Add data to get started

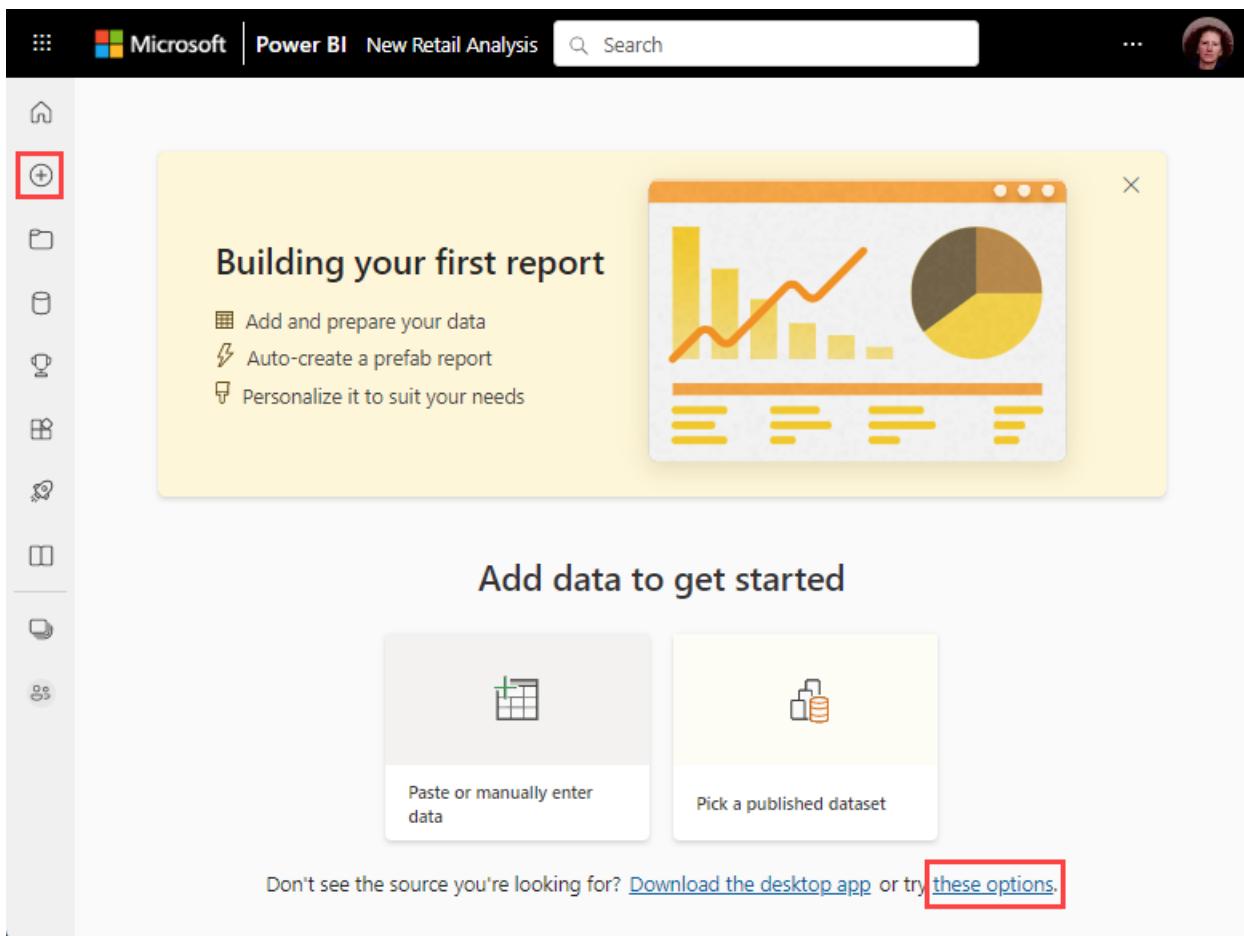


Paste or manually enter data



Pick a published dataset

Don't see the source you're looking for? [Download the desktop app](#) or try [these options](#).



## Next steps

Got feedback? We'd love to hear it at [Power BI Ideas](#).

Explore these training resources for Power BI:

[Learn Power BI](#)

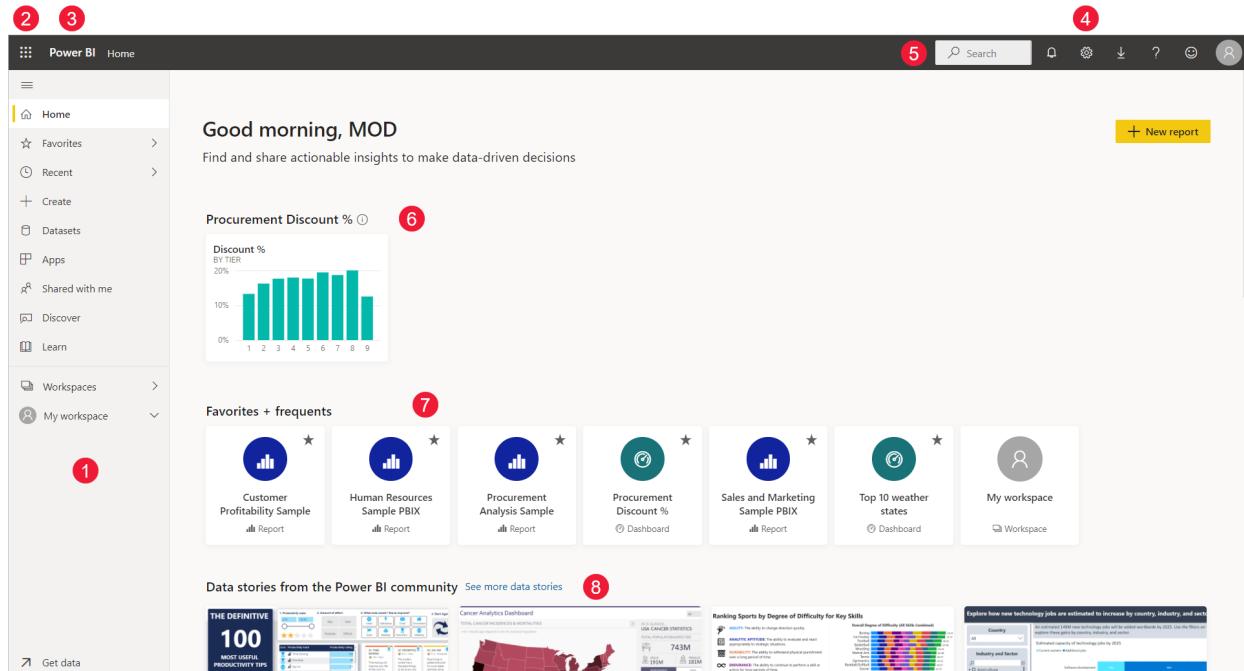
[Become a Power BI data analyst](#)

# Basic concepts for designers in the Power BI service

12/15/2022 • 14 minutes to read • [Edit Online](#)

The aim of this article is to orient you to the Power BI service: what the different elements are, how they work together, and how you can work with them. You may get more out of it if you've already [signed up for the Power BI service](#) and [added some data](#). As a designer, your typical workflow is usually to start by creating reports in Power BI Desktop. Then you publish them to the Power BI service, where you can continue modifying them. You also create the dashboards based on your reports in the Power BI service.

For this article, if you don't have your own reports yet try installing one of the [Power BI samples](#).



When you open the Power BI service in a browser, you start at your Home screen. Here are the elements you may see:

1. Navigation pane
2. Microsoft 365 app launcher
3. Power BI home button
4. Icon buttons, including settings, help, and feedback
5. Search box
6. Favorited dashboards that you use the most
7. Favorite and frequent dashboards, reports, and workspaces
8. Reports built by the Power BI Community, picked by the Power BI team

You and the end users for your reports and dashboards have the same start experience in the Power BI service in a browser.

We'll dig into these features later, but first let's review some Power BI concepts. Or you might want to watch this video first. In the video, Will reviews the basic concepts and gives a tour of the Power BI service.

#### NOTE

This video might use earlier versions of Power BI Desktop or the Power BI service.

<https://www.youtube.com/embed/B2vd4MQrz4M>

## Power BI concepts

The five major building blocks of Power BI are: *dashboards*, *reports*, *workbooks*, *datasets*, and *dataflows*. They're all organized into *workspaces*, and they're created on *capacities*. It's important to understand capacities and workspaces before we dig into the five building blocks, so let's start there.

## Capacities

Capacities are a core Power BI concept representing a set of resources (storage, processor, and memory) used to host and deliver your Power BI content. Capacities are either *shared* or *reserved*. A shared capacity is shared with other Microsoft customers, while a reserved capacity is reserved for a single customer. Reserved capacities require a [subscription](#), and are fully described in the [Managing Premium Gen2 capacities](#) article.

By default, workspaces are created on a shared capacity. In shared capacity, workloads run on computational resources shared with other customers. As the capacity must share resources, limitations are imposed to ensure "fair play", such as the maximum model size (1 GB) and maximum daily refresh frequency (eight times per day).

## Workspaces

Workspaces are created on capacities. Essentially, they are containers for dashboards, reports, workbooks, datasets, and dataflows in Power BI.

There are two types of workspaces: *My workspace* and *workspaces*.

- *My workspace* is the personal workspace for any Power BI customer to work with your own content. Only you have access to your My workspace. You can share dashboards and reports from your My Workspace. If you want to collaborate on dashboards and reports, or create an app, then you want to work in a workspace.
- *Workspaces* are used to collaborate and share content with colleagues. You can add colleagues to your workspaces and collaborate on dashboards, reports, workbooks, and datasets. With one exception, each workspace member needs a Power BI Pro or Premium Per User (PPU) license. Read more about [workspaces](#).

Workspaces are also the places where you create, publish, and manage *apps* for your organization. Think of workspaces as staging areas and containers for the content that will make up a Power BI app. So what is an *app*? It's a collection of dashboards and reports built to deliver key metrics to the Power BI consumers in your organization. Apps are interactive, but consumers can't edit them. App consumers, the colleagues who have access to the apps, don't necessarily need Pro or Premium Per User (PPU) licenses.

To learn more about sharing in general, start with [Ways to share dashboards your work](#).

Now, on to the five Power BI building blocks.

## Dataflows

A *dataflow* helps organizations to unify data from disparate sources. They are optional, and are often used in complex or larger projects. They represent data prepared and staged for use by datasets. Dataflows are surfaced in Power BI Desktop with a dedicated connector to enable reporting. When you connect to a dataflow, your

dataset can use the previously prepared data and business logic, promoting a single source of the truth and data reusability. They leverage the extensive collection of Microsoft data connectors, enabling the ingestion of data from on-premises and cloud-based data sources.

Dataflows are only created and managed in workspaces (but not *My Workspace*), and they are stored as entities in the Common Data Model (CDM) in Azure Data Lake Storage Gen2. Typically, they're scheduled to refresh on a recurring basis to store up-to-date data. They're great for preparing data for use—and potential re-use—by your datasets. For more information, see the [Self-service data prep in Power BI](#) article.

You can't have dashboards or reports without data (well, you can have empty dashboards and empty reports, but they're not useful until they have data), so let's now introduce datasets.

## Datasets

A *dataset* is a collection of data that you *import* or *connect* to. Power BI lets you connect to and import all sorts of datasets and bring all of it together in one place. Datasets can also source data from dataflows.

Datasets are associated with *workspaces* and a single dataset can be part of many workspaces. When you open a workspace, the associated datasets are listed under the **Datasets** tab. Each listed dataset is a source of data available for one or more reports, and the dataset may contain data that comes from one or more sources. For example, an Excel workbook on OneDrive, or an on-premises SSAS tabular dataset, or a Salesforce dataset.

There are many different data sources supported, and we're adding new ones all the time. See the list of [dataset types that you can use with Power BI](#).

In the example below, I've selected **My workspace** and then selected the **Datasets + dataflows** tab.

The screenshot shows the Power BI desktop application interface. The top navigation bar includes 'Power BI', 'My workspace', a search bar, and a user profile icon. On the left, a sidebar menu lists 'Home', 'Favorites', 'Recent', 'Create', 'Datasets' (which is highlighted with a red box), 'Apps', 'Shared with me', 'Discover', 'Learn', 'Workspaces' (with 'My workspace' expanded, also highlighted with a red box), and 'Get data'. The main content area is titled 'My workspace' and shows a list of datasets. At the top of this list are buttons for '+ New', 'View', 'Filters', and 'Search'. Below these are tabs for 'All' and 'Content', with 'Datasets + dataflows' being the active tab (also highlighted with a red box). The dataset list includes the following items:

Name	Type	Owner	Refreshed
Best states for sunglass sales	Dataset	MOD Administrator	4/13/21, 1:49:54 PM
Customer Profitability Sample PBIX	Dataset	MOD Administrator	4/8/21, 11:17:39 AM
Human Resources Sample PBIX	Dataset	MOD Administrator	4/8/21, 11:20:16 AM
Procurement Analysis Sample PBIX	Dataset	MOD Administrator	4/8/21, 11:22:06 AM
Retail Analysis Sample PBIX	Dataset	MOD Administrator	4/8/21, 11:23:42 AM
Sales and Marketing Sample PBIX	Dataset	MOD Administrator	4/8/21, 1:08:23 PM
Supplier-Quality-Analysis-Sample-PBIX	Dataset	MOD Administrator	4/8/21, 11:28:08 AM

### ONE dataset...

- can be used over and over in one or in many workspaces.
- can be used in many different reports.
- Visualizations from that one dataset can display on many different dashboards.



To [connect to or import a dataset](#), select **Get Data** at the bottom of the nav pane. Follow the instructions to connect to or import the specific source and add the dataset to the active workspace. New datasets are marked with a yellow asterisk. The work you do in Power BI doesn't change the underlying dataset.

Datasets added by one workspace member are available to the other workspace members with an *admin*, *member*, or *contributor* role.

Datasets can be refreshed, renamed, explored, and removed. Use a dataset to create a report from scratch or by running [quick insights](#). To see which reports and dashboards are already using a dataset, select **View related**. To explore a dataset, select it. What you're actually doing is opening the dataset in the report editor where you can really start exploring into the data by creating visualizations.

Now, let's move on to the next topic—reports.

### Dig deeper

- [Datasets in the Power BI service](#)
- [Dataset modes in the Power BI service](#)
- [What is Power BI Premium?](#)
- [Get data for Power BI](#)
- [Sample datasets for Power BI](#)

## Reports

A Power BI report is one or more pages of visualizations such as line charts, maps, and treemaps. Visualizations are also called *visuals*. All of the visualizations in a report come from a single dataset. You can create reports from scratch within Power BI, import them with dashboards that colleagues share with you, or Power BI can create them when you connect to datasets from Excel, Power BI Desktop, databases, and SaaS applications. For example, when you connect to an SaaS application, Power BI imports a pre-built report.

There are two modes to view and interact with reports: *Reading view* and *Editing view*. When you open a report, it opens in Reading view. If you have edit permissions, then you see **Edit report** in the upper-left corner, and you can view the report in Editing view. If a report is in a workspace, everyone with an *admin*, *member*, or *contributor* role can edit it. They have access to all the exploring, designing, building, and sharing capabilities of Editing view for that report. The people they share the report with can explore and interact with the report in Reading view.

When you open a workspace, the associated reports are listed under the **Content** tab. Each listed report represents one or more pages of visualizations based on only one of the underlying datasets. To open a report, select it.

When you open an app, you're presented with a dashboard. To access an underlying report, select a dashboard tile (more on tiles later) that was pinned from a report. Keep in mind that not all tiles are pinned from reports, so you may have to click a few tiles to find a report.

By default, the report opens in Reading view. Just select **Edit report** to open it in Editing view (if you have the necessary permissions).

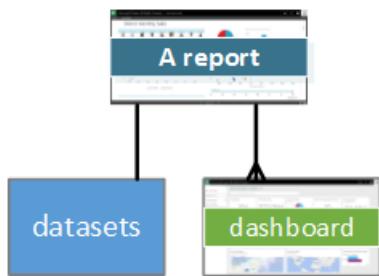
In the example below, I've selected **My workspace** and then selected the **Content** tab.

The screenshot shows the Power BI service interface. On the left, there's a navigation sidebar with options like Home, Favorites, Recent, Create, Datasets, Apps, Shared with me, Discover, Learn, Workspaces, and My workspace. The 'My workspace' option is highlighted with a red box. The main area is titled 'My workspace' and shows a list of reports and dashboards. The 'Content' tab is selected, and the list includes:

Name	Type	Owner	Refreshed
Best states for sunglass sales	Report	MOD Administrator	4/13/21, 1:49:54 PM
Customer Profitability Sample PBIX	Report	MOD Administrator	4/8/21, 11:17:39 AM
Human Resources Sample PBIX	Report	MOD Administrator	4/8/21, 11:20:16 AM
Procurement Analysis Sample PBIX	Report	MOD Administrator	4/8/21, 11:22:06 AM
Procurement Discount %	Dashboard	MOD Administrator	—
Retail Analysis Sample PBIX	Report	MOD Administrator	4/8/21, 11:23:42 AM
Supplier-Quality-Analysis-Sample-PBIX	Report	MOD Administrator	4/8/21, 11:28:08 AM

ONE report...

- is contained in a single workspace.
- can be associated with multiple dashboards within that workspace. Tiles pinned from that one report can appear on multiple dashboards.
- can be created using data from one dataset. Power BI Desktop can combine more than one data source into a single dataset in a report, and that report can be imported into Power BI.



### Dig deeper

- [Create a report in the Power BI service by importing a dataset](#)
- [Optimize reports for the Power BI mobile apps](#)

## Dashboards

A **dashboard** is something you create in the Power BI service or something a colleague creates in the Power BI service and shares with you. It is a single canvas that contains zero or more tiles and widgets. Each tile pinned from a report or from Q&A displays a single **visualization** that was created from a dataset and pinned to the dashboard. Entire report pages can also be pinned to a dashboard as a single tile. There are many ways to add tiles to your dashboard; too many to be covered in this overview topic. To learn more, see [Dashboard tiles in Power BI](#).

Why do people create dashboards? Here are just some of the reasons:

- to see, in one glance, all the information needed to make decisions.
- to monitor the most-important information about your business.
- to ensure all colleagues are on the same page, viewing and using the same information.

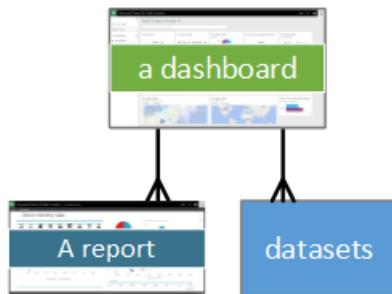
- to monitor the health of a business or product or business unit or marketing campaign, etc.
- to create a personalized view of a larger dashboard -- all the metrics that matter to you.

When you open a workspace, the associated dashboards are listed under the **Content** tab. To open a dashboard, select it. When you open an app, you'll be presented with a dashboard. Each dashboard represents a customized view of some subset of the underlying dataset(s). If you own the dashboard, you'll also have edit access to the underlying dataset(s) and reports. If the dashboard was shared with you, you'll be able to interact with the dashboard and any underlying reports, but will not be able to save any changes.

There are many different ways that you, or a colleague, can [share a dashboard](#). Power BI Pro is required for sharing a dashboard and may be required for viewing a shared dashboard.

**ONE** dashboard...

- is associated with a single workspace
- can display visualizations from many different datasets
- can display visualizations from many different reports
- can display visualizations pinned from other tools (for example, Excel)



#### Dig deeper

- [Create a blank dashboard and then get some data .](#)
- [Duplicate a dashboard](#)
- [Create a phone view of a dashboard](#)

## Workbooks

Workbooks are a special type of dataset. If you've read the **Datasets** section above, you know almost all you need to know about workbooks. But you may be wondering why sometimes Power BI classifies an Excel workbook as a **Dataset** and other times as a **Workbook**.

When you use **Get data** with Excel files, you have the option to *Import* or *Connect* to the file. When you choose **Connect**, your workbook will appear in Power BI just like it would in Excel Online. But, unlike Excel Online, you'll have some great features to help you pin elements from your worksheets right to your dashboards.

You can't edit your workbook in Power BI. But if you need to make some changes, you can click **Edit**, and then choose to edit your workbook in Excel Online or open it in Excel on your computer. Any changes you make are saved to the workbook on OneDrive.

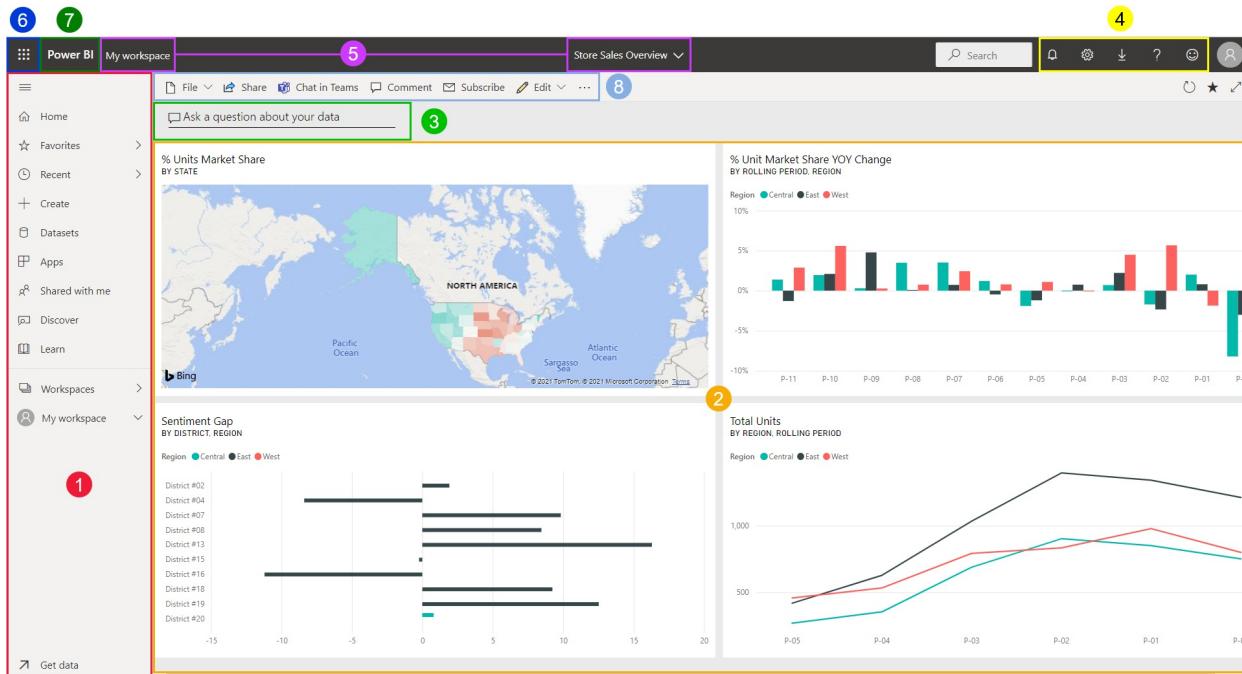
#### Dig deeper

- [Get data from Excel workbook files](#)
- [Publish to Power BI from Excel](#)

## A dashboard in My Workspace

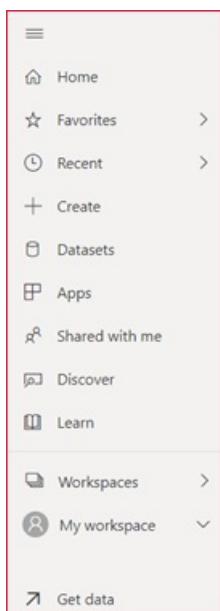
We've covered workspaces and building blocks. Let's bring it together and review the pieces that make up the

dashboard experience in the Power BI service.



## 1. Navigation pane

Use the nav pane to locate and move between your workspaces and the Power BI building blocks: dashboards, reports, workbooks, and datasets.



- Select **Get Data** to [add datasets, reports, and dashboards to Power BI](#).



- Expand and collapse the nav pane with this icon
- Open or manage your favorite content by selecting **Favorites**.
- View and open your most-recently visited content by selecting **Recent**.
- Add data to create a report by selecting **Create**.
- Explore the datasets in your org to find the data that suits your needs by selecting **Datasets**.
- View, open, or delete an app by selecting **Apps**.
- Did a colleague share content with you? Select **Shared with me** to search and sort that content to find what you need.
- Discover inspiring reports built by the Power BI Community by selecting **Discover**.
- Access your hub for all Power BI training by selecting **Learn**.

- Display and open your workspaces by selecting **Workspaces**.

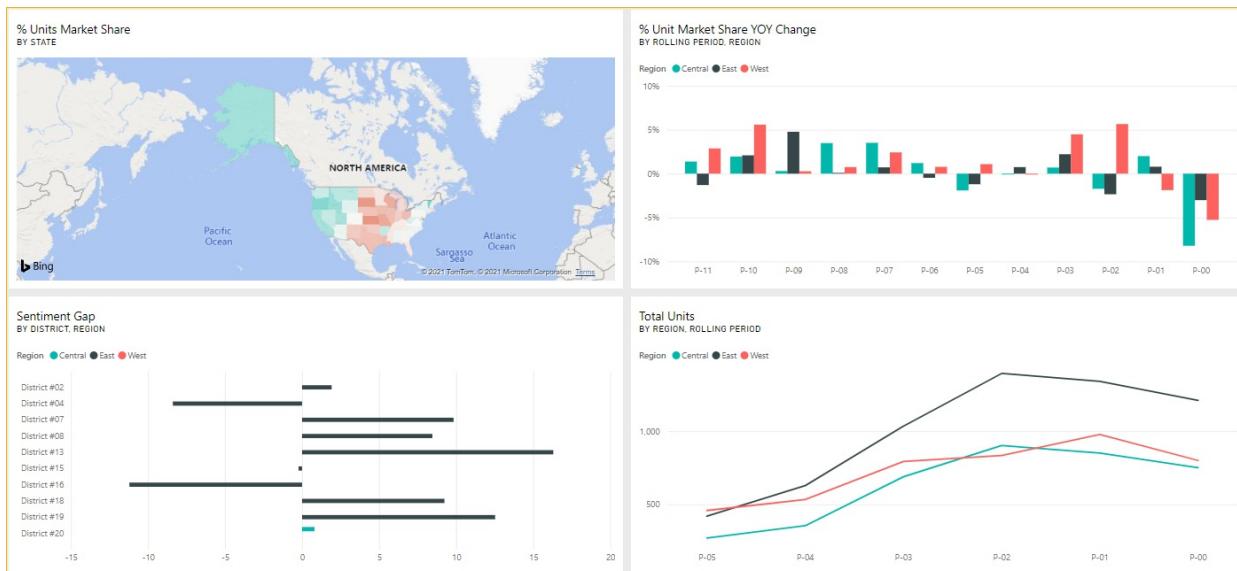
Single-click these elements:

- an icon or heading to open in content view
- a right arrow (>) to open a flyout menu for Favorites, Recent, and Workspaces.
- a chevron icon to display the **My Workspace** scrollable list of dashboards, reports, workbooks, and datasets.

## 2. Canvas

Because we've opened a dashboard, the canvas area displays visualization tiles. If for example, we had opened the report editor, the canvas area would display a report page.

Dashboards are composed of **tiles**. Tiles are created in report Editing view, Q&A, other dashboards, and can be pinned from Excel, SSRS, and more. A special type of tile called a **widget** is added directly onto the dashboard. The tiles that appear on a dashboard were specifically put there by a report creator/owner. The act of adding a tile to a dashboard is called *pinning*.



For more information, see [Dashboards](#) (above).

## 3. Q&A question box

One way to explore your data is to ask a question and let Power BI Q&A give you an answer, in the form of a visualization. Q&A can be used to add content to a dashboard or report.

Q&A looks for an answer in the dataset(s) connected to the dashboard. A connected dataset is one that has at least one tile pinned to that dashboard.

Ask a question about your data

As soon as you start to type your question, Q&A takes you to the Q&A page. As you type, Q&A helps you ask the right question and find the best answer with rephrasings, autofill, suggestions, and more. When you have a visualization (answer) you like, pin it to your dashboard. For more information, see [Q&A in Power BI](#).

## 4. Icons in the black header bar

The icons in the upper right corner are your resource for settings, notifications, downloads, getting help, and providing feedback to the Power BI team.



## 5. Dashboard title

It's not always easy to figure out which workspace and dashboard are active, so Power BI shows you the workspace and the dashboard title. In this example, we see the workspace (My workspace) and the dashboard title (Store Sales Overview). If we opened a report, the name of the report would be displayed.



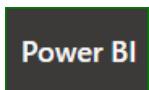
## 6. Microsoft 365 app launcher

With the app launcher, all your Microsoft 365 apps are easily available with one click. From here, you can quickly launch your email, documents, calendar, and more.



## 7. Power BI home

Selecting Power BI brings you back to your Power BI home.



## 8. Labeled icons in the gray menu bar

This area of the screen contains additional options for interacting with the content (in this case, with the dashboard). Besides the labeled icons you can see, selecting the **More options (...)** icon reveals options for seeing related content, opening lineage view, opening usage metrics, and more.



## Next steps

- [What is Power BI?](#)
- [Power BI videos](#)
- [Report editor - take a tour](#)
- More questions? [Try asking the Power BI Community](#)

# 10 tips for getting help with your Power BI questions

12/15/2022 • 2 minutes to read • [Edit Online](#)

Do you ever get frustrated using Power BI, or struggle because you can't get answers to your Power BI questions when you need them—in other words, "just-in-time"?

Here are 10 tips that Power BI experts (including people who work on the product at Microsoft) commonly follow to find answers to their Power BI questions.

## 1 Use a search engine

Experts who need answers for Power BI often use search. Want to find a DAX formula for a common business calculation? You can find this on the internet. Bookmark where you find the best answers. Create a folder for yourself on tips and answers you find.

## 2 Check the Power BI documentation

The Power BI team is continually updating and improving [the Power BI documentation](#). You can find great content including recordings of webinars, white papers, tutorials, how-tos, and links to blog posts on all the latest features.

## 3 Read the Power BI blog for the latest news

The Power BI team explains all the new features in their regular [Power BI blog posts](#). Find out what's new in everything from Power BI Desktop to the Power BI mobile apps. Make a habit of returning often to learn about the new features released each month. You never know when you'll benefit from that bit of information you noticed months ago.

## 4 Try Twitter

Lots of Power BI customers and experts are on Twitter. Ask your question in a tweet. Add the hashtags `#PowerBI` and `#PowerBIRHelp` so the people who know see your tweet.

## 5 Watch videos on YouTube

Do videos fit your learning style better? Power BI has two sets you'll be interested in:

- A good place to start is the [Power BI home page on YouTube](#).
- Then try the [Power BI Videos channel](#) for a much bigger selection.

## 6 Attend training

The training options available to you are nearly endless, from in-person lab training to short videos.

- [Microsoft Learn training for Power BI](#)
- [Free Power BI webinars](#), live and on-demand, on the Power BI site.

You can find additional options online, such as:

- [edX.org](#) offers a number of free and paid courses, including certifications.
- [LinkedIn Learning](#) offers many Power BI courses including [Power BI Essential Training](#).

- Look for in-person "Dashboard in a Day" training sessions.

## 7 Ask or search in the Power BI community

Ask questions and find answers in the [Power BI community](#). BI experts around the world are active in the community and questions are usually answered quickly. Make sure to benefit from their knowledge by using this resource.

## 8 Join or create a Power BI user group

Join a [Power BI user group](#) and ask your group for help in answering your questions. Or you start your own user group and create a community of people who help each other out, focused on your needs: in your area, for your data, in your time zone.

## 9 Check the service status

If you're having an issue with the service, it may be that the service itself is having issues. [Check the Support page](#) for any reports.

## 10 Just try it

If all else fails, the final tip is to observe the system. Often, people ask what capabilities Power BI has. You can often answer this type of question by opening the Power BI service or Power BI Desktop, looking at the options in the user interface, and then trying to use them.

Try opening the Power BI service and navigating to [Home](#). Scroll down for links to Getting Started resources.

## Next steps

- [What is Power BI?](#)

# Sign up for or purchase the Power BI service as an individual

12/15/2022 • 10 minutes to read • [Edit Online](#)

Power BI can be your personal data analysis and visualization tool, and can also serve as the analytics and decision engine behind group projects, divisions, or entire corporations. This article explains how individuals can use **self-service sign-up** and **self-service purchase** to get a license for the Power BI service for themselves. If you're a global administrator or billing administrator, see [Power BI licensing for your organization](#). To download the free Power BI Desktop, see [Get Power BI Desktop](#).

For definitions and an overview of self-service-sign-up and self-service purchase, visit [Self-service for Power BI](#).

## License scenarios

Use this chart to help determine which type of license you need. Power BI Desktop is always free. The Power BI service offers both free and paid license options. Paid options include Power BI Pro, Power BI Premium, and Power BI Premium Per User (PPU). Some questions to ask yourself are: "Will I be creating content or will I only be consuming content created by others?", "Will I be sharing my content with others?", "Do I have access to Premium capacity?". For help answering these questions, see [Power BI feature list for consumers](#), [What is Premium](#), and [Licenses and subscriptions for business users and consumers](#).

SCENARIO	CREATOR	CONSUMER
You create a report in Power BI Desktop (.PBIX). Then you publish it to your My Workspace on the Power BI Service.	As a creator, you only need the free Desktop app and a free Power BI license to publish to your My Workspace in the Power BI service for your own use. A paid Power BI Pro or PPU license is required to share content in My Workspace with others.	Consumers cannot see content in other people's My Workspace unless the owners decide to share. To see shared My Workspace content requires a paid license.
You create a report in Power BI Desktop (.PBIX) and share the PBIX file to other people who open the file in Power BI Desktop	No licensing needed, only the Power BI Desktop app to be downloaded and installed.	No licensing needed, only the Power BI Desktop app to be downloaded and installed.
You create a report in Power BI Desktop (.PBIX) and publish it to a shared workspace in the Power BI service.	Paid license needed to publish to shared workspaces.	Paid license required to view the content unless the workspace is hosted in Premium capacity. For workspaces in Premium capacity, the consumer only needs a free license to view that report.
You are sent a link to a report hosted on the Power BI Service and want to view it.	You need a paid license to share a link. You need a free license to share a link to a report that is in Premium capacity.	A paid license is required to view the report unless the report is hosted in Premium capacity. For reports hosted in Premium capacity, the consumer only needs a free license to view that report.

## Supported email addresses

Before you start the self-service process, it's important to learn which types of email addresses you can use to sign-up for or purchase Power BI:

- Power BI requires that you use a work or school email address. You can't sign up or purchase using email addresses provided by consumer email services or telecommunication providers. This includes outlook.com, hotmail.com, gmail.com, and others. If you don't have a work or school account, [learn about alternate ways to sign up](#).
- You can sign-up for or purchase Power BI with .gov or .mil addresses, but this requires a different process. For more info, see [Enroll your US Government organization in the Power BI service](#).

## Use self-service sign-up to get an individual Power BI license

Follow these steps to sign up for a Power BI service account. Once you complete this process you will have a Power BI (free) license which you can use to try the Power BI service on your own using My Workspace, consume content from a Power BI workspace assigned to a Power BI Premium capacity, or initiate an individual Power BI trial. For more information, see [Power BI features by license type](#).

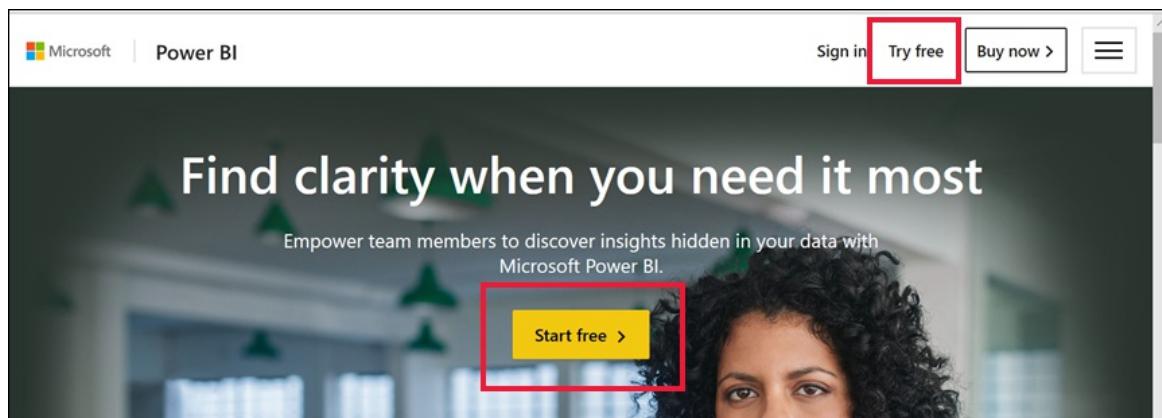
The exact steps for sign up can vary depending on your organization and what you click to start the process. For this reason, you may not be presented with all of the screens shown below. There are many different ways to sign up for the Power BI service as an individual, and the steps in this article apply to the two most common.

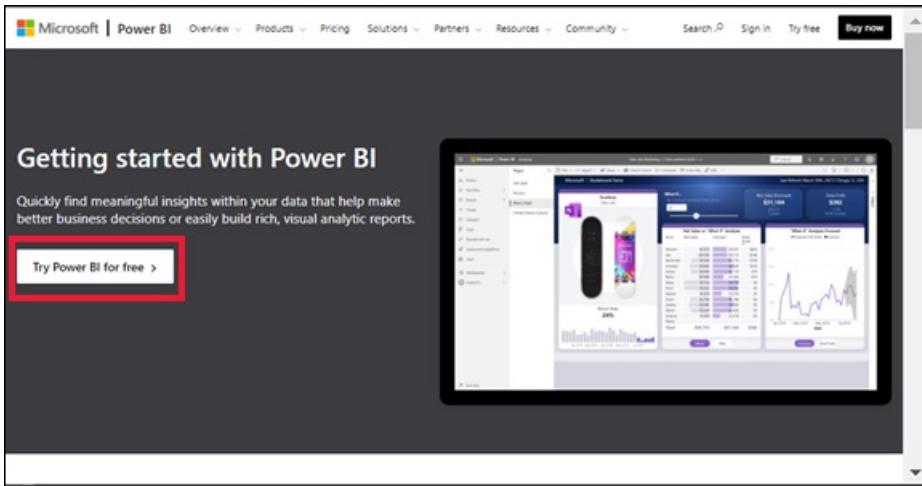
- you select a **Try free** or **Start free** button<sup>1</sup>.
- you receive an email with a link to a Power BI dashboard, report, or app. You haven't previously signed in to your Power BI account.

<sup>1</sup>You'll find the **Try free** type of buttons on powerbi.microsoft.com, in related Microsoft products, and in documentation and marketing articles.

### Step 1

- Select **Try free** from [powerbi.microsoft.com](https://powerbi.microsoft.com). You may then be prompted to select **Try Power BI for free**.





- Or, select an email link to a Power BI dashboard, report, or app.

The email is from Microsoft Power BI. The subject line is "zalan bola has shared Power BI Report 'Sales and Marketing Sample' with you". The message body starts with "zalan bola shared this Power BI Report with you". It includes the report title "Sales and Marketing Sample" and a message saying "I'd like to share this Power BI report with you:". A yellow button labeled "Open this report >" is highlighted with a red box.

1. When prompted, sign in using your organizational account.

The screenshot shows a Microsoft 365 sign-in page. The main heading is "Get started". Below it is a text input field containing "figgy@figfarm.onmicrosoft.com", which is underlined with a red wavy line, indicating it's a new email address. Below the input field is a "Sign up" button with a right-pointing arrow icon. The background features faint, overlapping icons related to Microsoft services like Excel, Word, and Power BI.

2. In this example, Microsoft 365 recognizes you and knows that you already have at least one other Microsoft service installed. Select Sign in.

# You have an account with us

You're using figgy@figfarm.onmicrosoft.com with another Microsoft service already. To finish signing up for Microsoft Power BI, sign in with your existing password.

Sign in →

3. You may receive one of these dialog boxes.

- If you get a message like this, make sure that you are using a work or school email address and not a consumer address like hotmail, gmail, or outlook. See [supported email addresses, above](#).

## Did you get your email address from your company?

Microsoft Power BI is designed to be used by people within a company, so your email address may be visible to others who sign up with addresses. If your email address wasn't provided to you by your company, we want to make sure you don't use it with Microsoft Power BI. Addresses from free services like outlook.com, or from shared email service providers, shouldn't be used.

Yes →

No, I'll use a different email address →

- If you get a message like this, review the terms and conditions. If you agree, select **Start**.

# Almost there

You're signed in as figgy@figfarm.onmicrosoft.com

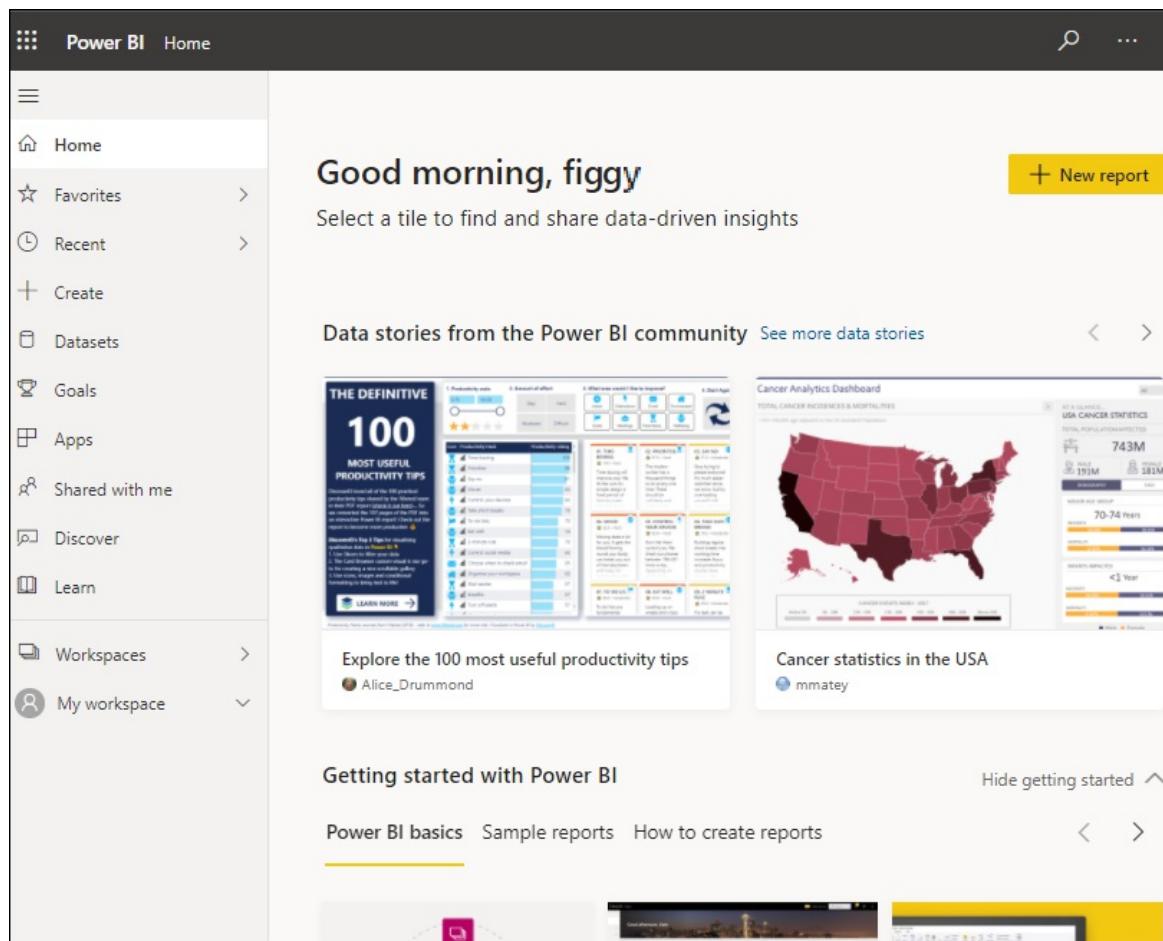
Microsoft will send you promotions and offers about Microsoft products and services for businesses. You can unsubscribe anytime.

I would like Microsoft to share my information with select partners so I can receive relevant information about their products and services. To learn more, or to unsubscribe at any time, view the [Privacy Statement](#).

By choosing **Start**, you agree to our [terms and conditions](#) and [Microsoft Privacy Policy](#) and acknowledge that your email address is associated with an organization (and is not a personal use or consumer email address). You also understand an administrator of your organization may assume control over your account and data and that your name, email address, and trial organization name will be visible to other people in your organization. [Learn more](#).

Start 

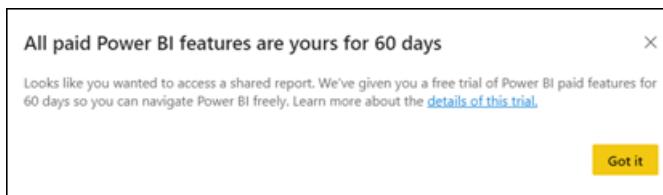
4. At this point, you may have to wait if Microsoft is [setting up a new tenant](#). Otherwise, the Power BI service opens in your browser.



The screenshot shows the Power BI Home page. On the left, a sidebar lists navigation options: Home, Favorites, Recent, Create, Datasets, Goals, Apps, Shared with me, Discover, Learn, Workspaces, and My workspace. The main area features a greeting "Good morning, figgy" and a call to action "Select a tile to find and share data-driven insights". Below this, there's a section titled "Data stories from the Power BI community" with a "See more data stories" link. Two data stories are displayed: "THE DEFINITIVE 100 MOST USEFUL PRODUCTIVITY TIPS" by Alice\_Drummond and "Cancer Analytics Dashboard" by mmatey. At the bottom, there's a "Getting started with Power BI" section with links to "Power BI basics", "Sample reports", and "How to create reports". A "Hide getting started" button is located in the top right corner of this section.

Use self-service sign-up to start an individual trial of the Power BI paid version

Congratulations on signing into your Power BI account for the first time! You now have a free license<sup>2</sup>. As you start to explore the Power BI service, you may see pop-ups asking if you want to upgrade to an individual trial of the paid version of Power BI which includes Power BI Pro and Power BI Premium Per User (PPU). If you do, select **Try now**. In some organizations, if you try to use a feature that requires a Pro or PPU license, Power BI will automatically initiate a 60 day trial of the paid version of Power BI. **Some features of the Power BI service require a Pro or PPU license**. If you'd like to start a free 60 day individual trial, select **Start trial**.



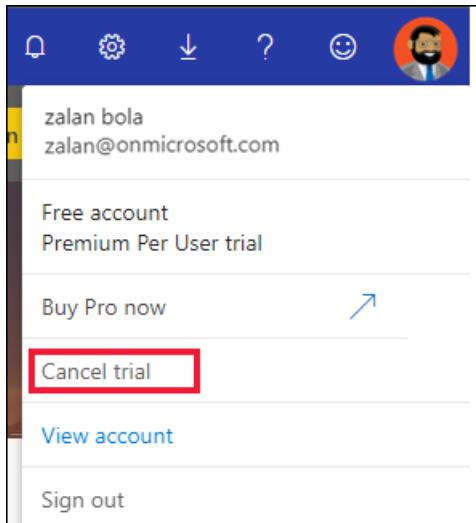
<sup>2</sup> In some organizations, your default Power BI account may be a Power BI Pro license. For example, some versions of Microsoft 365 include a Power BI Pro license. To learn how to look up your user license, see [what license do I have?](#)

If a Power BI (free) license is sufficient, you don't have to do anything else. To take advantage of Power BI Pro or Premium Per User features, you can upgrade your license using self-service purchase.

### Trial expiration

When your free individual trial of Power BI expires, or you cancel your trial, your license changes back to its previous version of Power BI, either free or Pro. The trial cannot be extended. For more information, see [Features by license type](#).

If you'd like to cancel your trial before the expiration date, select your account icon and choose **Cancel trial**.



## Use self-service purchase to buy an individual Power BI license

Individuals can make a self-service purchase online from the Power BI website or from in-product purchase prompts. Individuals are first asked to enter an email address to ensure that their email address is already associated with at least one other Microsoft online service. If they're recognized by Microsoft, they're next directed to sign in. After signing in, the individual is asked to select how many subscriptions they want to buy, and to provide credit card payment. When the purchase is complete, they can start using their subscription. The purchaser has access to a limited view of the Microsoft 365 admin center where they can assign licenses for the product to other people in their organization.

If you have additional questions about self-service purchase, visit the [Self-service purchase FAQ](#).

To purchase a Power BI Pro license, select **Buy now** when prompted, or visit [Power BI pricing](#). Self-service purchase is also available for Power BI Premium Per User, and the steps are similar.

Power BI Pro

Per user

**\$9.99**

Per user/month

License individual users with modern, self-service analytics to visualize data with live dashboards and reports, and share insights across your organization.

- Power BI Pro is included in [Microsoft 365 E5](#).
- Available to buy now with a credit card.<sup>1</sup>

[Buy now >](#)

Enter your email address. In this example, the individual already has a free Power BI license and is recognized by Microsoft.

 Microsoft

## Get started with **Power BI Pro**

for \$9.99 user/month

Price shown in USD. Currency may vary by country.

**1** Let's get started

Enter your work email address and we'll check to see if you have an account with us.

Email  
figgy@contoso.com

By proceeding you acknowledge that if you use your organization's email, your organization may have rights to access and manage your data and account.

[Learn More](#)

[Continue](#)

**2** Tell us about yourself

1

## Let's get started

Looks like you're already using this email with another Microsoft service. Sign in to purchase with this account.

I will receive information, tips, and offers about Microsoft Online Services and other Microsoft products and services. [Privacy Statement](#).

[Sign in](#)

Complete the order form to purchase Power BI Pro.

The screenshot shows the Microsoft 365 admin center with a "Checkout" section. On the left, there are fields for "Company name" (filled with "figsales"), "First name" (filled with "Figgy"), "Middle name" (empty), "Last name" (empty), "Address line 1" (empty), "Address line 2 (Optional)" (empty), and "City" (empty). On the right, a "Summary" table shows one item at USD 9.99, subtotal at USD 9.99, estimated taxes at USD 0.00, and a total of USD 0.00. Below the summary, there are terms and conditions links and a "Place order" button.

Summary	
Item(s):	1
Subtotal:	USD 9.99
Estimated taxes:	USD 0.00
Total:	USD 0.00

By clicking Place order you agree to our terms and conditions.

Any subscriptions begin immediately, and billing starts with your next monthly invoice.

For information on how your data will be handled, see the [privacy notice](#). Please read the [entire agreement](#) before accepting terms and conditions.

[Place order](#)

If self-service purchase is not available, contact your administrator about purchasing a Power BI Pro license.

## Troubleshooting

In most cases, you can sign up for the Power BI service by following the described process. Some of the issues that may prevent you from signing up are described below, with possible workarounds.

**Personal email addresses** You attempt to sign up using a personal email address (for example nancy@gmail.com) and you receive a message similar to one of these:

*You entered a personal email address: Please enter your work email address so we can securely store your company's data.*

or

*That looks like a personal email address. Enter your work address so we can connect you with others in your company. And don't worry. We won't share your address with anyone.*

**Solution** The Power BI service doesn't support email addresses provided by consumer email services or telecommunications providers. To finish signing up, try again using an email address assigned by your work or school.

If you still can't sign up and are willing to complete a more advanced setup process, you can [register for a new Microsoft 365 trial subscription and use that email address to sign up](#).

You can also have an existing user [invite you as a guest](#).

### Self-service sign up is disabled

You attempt to sign up and receive a message similar to this:

*We can't finish signing you up. Your IT department has turned off signup for Microsoft Power BI. Contact them to complete signup.*

### Solution

Self-service sign up for Power BI has been disabled. To finish signing up, contact your IT department or help desk and ask them to [follow these instructions to assign you a license](#).

You may also experience this problem if you signed up for Microsoft 365 through a partner. In which case, contact the organization responsible for providing you with Microsoft 365.

**Your email address isn't a Microsoft 365 ID** You attempt to sign up or purchase and receive a message like this:

*We can't find you at contoso.com. Do you use a different ID at work or school? Try signing in with that, and if it doesn't work, contact your IT department.*

**Solution** Your organization uses IDs (that are different than your email address) to sign in to Microsoft 365 and other Microsoft services. For example, your email address might be zalan.bola@contoso.com but your ID is zalanb@contoso.com.

To finish signing up or purchasing, use the ID that your organization has assigned to you for signing in to Microsoft 365 or other Microsoft services. If you don't know what this is, contact your global administrator.

If you still can't sign up or purchase and are willing to complete a more advanced setup process, you can [register for a new Microsoft 365 trial subscription and use that email address to sign up](#).

### Power BI sign in doesn't recognize your password

**Solution** Sometimes it takes a few tries. If you retry your password several times and you still can't log in, try running your browser in Incognito (Chrome) or InPrivate (Edge) mode.

**You don't receive in-product prompts** You don't see prompts to upgrade (Buy now) or start a trial (Try now), and the UI doesn't display Try now or Buy now buttons.

**Solution** The type of upgrade and trial options that you are offered will depend on how your administrator has set up your domain. Your administrators have the ability to disable all trials, disable self-service purchase, and more.

## Next steps

[Self-service purchase FAQ](#)

[Power BI features by license type](#)

[Tips for finding help](#)

More questions? [Try asking the Power BI Community](#)

# Sign up or purchase the Power BI service as an individual

12/15/2022 • 5 minutes to read • [Edit Online](#)

Power BI can serve as the analytics, visualization, and decision engine behind group projects, divisions, or entire corporations but it can also be your personal data analysis and visualization tool. This article explains the options you have to sign up for or purchase Power BI as an individual.

There are two ways for individuals to get a Power BI license. They can sign up for or purchase a license for themselves, or they can rely on an administrator to assign them a license. This article explains the first option, which is called **self-service**.

For an overview of self-service, visit [Self-service for Microsoft 365 products and services](#).

To skip ahead to using self-service, visit [How to use self-service sign-up and self-service purchase](#).

## Self-service sign-up versus self-service purchase

The **self-service sign-up** feature is used by individuals who sign themselves up for free and trial licenses. **Self-service purchase** is the feature used by individuals to buy a Pro or Premium Per User license for themselves.

### Self-service for the Power BI service

This article describes the self-service process for the **Power BI service**. If you are looking for help downloading Power BI Desktop or installing the mobile apps, please refer to these articles instead:

- [Power BI Desktop \(it's a totally free download\)](#)
- [Power BI mobile apps \(also a totally free download\)](#)

## Get an individual user license for the Power BI service

There are many different ways to get a per-user license for the Power BI service. These include:

- If your organization already has a subscription for Power BI, you may be able to self-assign a license. The type of licenses available will depend on what type of subscriptions your organization has purchased and how your admin has configured Power BI.
- You can visit [powerbi.com](#) and click a "Try free" or "Buy now" link. Then, follow the prompts to complete the sign up or purchase.
- If you already have a license and try to use an advanced feature, Power BI may prompt you to upgrade or try a free trial. Users with a Power BI (free) license may be presented with the opportunity to upgrade their account to Power BI Pro while using the service. Users who already hold a Power BI Pro license may be prompted to upgrade to a Power BI Premium Per User license.

For step-by-step instructions on using self-service sign-up and self-service purchase, see [How to sign up for Power BI as an individual](#)

### Power BI license types

Before you sign-up or purchase, determine which **license type** you need. Power BI offers several per-user licenses: free, Pro, and Premium Per User. Power BI also offers a free trial upgrade for Premium Per User. When an individual signs-up or purchases Power BI, they're assigned a Power BI license automatically. Not sure what type of license you need?

- With a free license, you can explore Power BI for personal data analysis and visualization using My Workspace, but you can't share with other users. A Power BI Pro or Power BI Premium Per User license is required to share content.
- With a Pro license, you can collaborate with Premium per-user and Pro users by creating and sharing content. If that content is in Premium capacity, a Pro user can collaborate with free, Premium per user, and Pro users by creating and sharing content.
- With a Premium Per User license, you can access Premium features for yourself and other users who also have a Premium Per User license. A Power BI Premium subscription unlocks access to a variety of features, capabilities, and types of content that are only available through Premium. Power BI Premium is available as an add-on to Power BI Pro. For information about Premium subscriptions, see [What is Power BI Premium?](#).

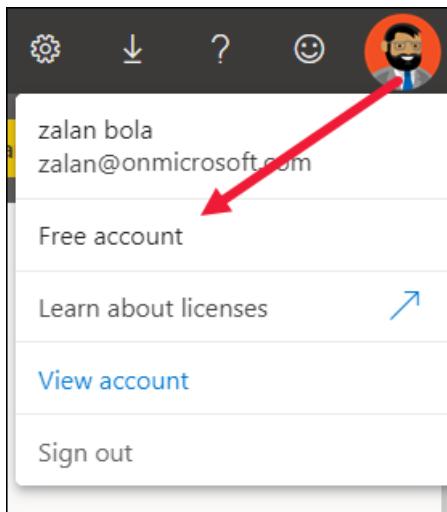
**NOTE**

Direct purchase of or upgrade to Pro or Premium Per User isn't available to educational organizations or organizations deployed to Azure Government or Azure China 21Vianet clouds. For more information about licenses and subscriptions, see [Licensing in Power BI](#).

### Look up your current license

You may already have access to Power BI. Perhaps your organization has already added you to a Power BI subscription. Also, some versions of product licenses, such as Office 365 E5, include a Power BI Pro license, so no separate sign-up for Power BI is needed.

Check to see if you can already sign in. Open the Power BI service with this URL: [app.powerbi.com](http://app.powerbi.com). If Power BI opens, from the upper right corner, select the **Me** icon to see your current license(s).



If you are unable to log in to the Power BI service, or you want an alternate way to look up your Power BI licenses, open your Microsoft account instead. The URL is: [myaccount.microsoft.com](http://myaccount.microsoft.com).

- Sign in with the same work or school account you will use with the Power BI service.
- From the menu on the left, select **Subscriptions**

The screenshot shows the Microsoft My Account Overview page. On the left, a sidebar lists several options: Security info, Devices, Password, Organizations, Settings & Privacy, My sign-ins, Office apps, and Subscriptions. The 'Subscriptions' option is highlighted with a red box. The main area displays a user profile for 'figgy farm' (figgy@figfarm.onmicrosoft.com) with a blue person icon. Below the profile are sections for Security info, Password, Devices, Organizations, Settings & Privacy, and My sign-ins. The 'Subscriptions' section is partially visible at the bottom.

3. Scroll through your subscriptions and look for **Power BI**. In this example, the individual has both a free license and a Pro license. The Pro license is included with their Office 365 E5.

The screenshot shows the Microsoft My account interface. On the left, a sidebar lists several options: My account, Personal info, Subscriptions (which is highlighted with a red box and has a red arrow pointing to it from the bottom), Security & privacy, App permissions, Apps & devices, and Tools & add-ins. The main content area is titled "Subscriptions". It displays a message about licenses assigned to the user. Below this, it shows "User unique identifier" as 1 and a list of "Licenses". The list is titled "Office 365 E5" and includes the following items:

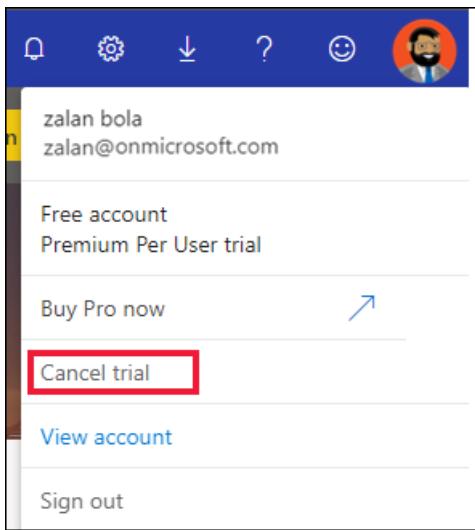
- Microsoft 365 Advanced Auditing
- Whiteboard (Plan 3)
- Information Protection for Office 365 - Premium
- Information Protection for Office 365 - Standard
- Office 365 Privileged Access Management
- To-Do (Plan 3)
- Microsoft Forms (Plan E5)
- Microsoft Stream for O365 E5 SKU
- Microsoft Defender for Office 365 (Plan 2)
- Microsoft StaffHub
- Power Automate for Office 365
- Power Apps for Office 365 Plan 3
- Microsoft Teams
- Office 365 Cloud App Security
- Office 365 Advanced eDiscovery
- Customer Lockbox
- Microsoft MyAnalytics (Full)
- Sway
- Power BI Pro
- Microsoft Planner
- Azure Rights Management
- Yammer Enterprise
- The latest desktop version of Office
- Skype for Business Online (Plan 2)
- Exchange Online (Plan 2)
- SharePoint (Plan 2)
- Office for the web

The screenshot shows the Microsoft My account interface. On the left, a sidebar lists several options: My account, Personal info, Subscriptions (which is highlighted with a red box and has a red arrow pointing to it from the bottom), and Security & privacy. The main content area is titled "Subscriptions". It shows a list of licensed products. The first item is "Power BI (free)" which is repeated twice. Below it is "Windows 10 Enterprise E5" followed by "Universal Print" and "Microsoft Defender For Endpoint".

## Information about Power BI trials

One of the ways to get an individual license is to sign up for a free trial of the paid version of Power BI Premium Per user. Typically, trials last for one or two months. If you don't purchase the upgrade at the end of the trial period, your license reverts back to free or Pro, depending on which you had before starting the trial.

To cancel a trial, select **Cancel trial** from the Me icon.



### Unable to sign-up or purchase Power BI

If you are unable to use self-service to get your own Power BI license it may be that your administrator has disabled this option. The admins who manage the domain can disable self-service sign-ups, self-service purchases, upgrades, and free trials. For help when you can't use self-service, see [Self-service purchase help](#).

## Considerations and troubleshooting

- If you are part of an organization and have used self-service to purchase Power BI, the global or billing admin for your organization can [takeover ownership](#) of your subscription, and then assign or unassign licenses.
- If you don't purchase Premium Per User at the end of the trial period, you still have either a Pro or free license. Also, you will still have access to the workspace, but content that requires the Premium Per User license will be unavailable.

## Next steps

- For step by step instructions for using self-service sign up and self-service purchase to get your own Power BI free or trial license, visit [Power BI self-service for individuals](#)
- To learn more about the concepts of self-service sign up and self-service purchase, visit [What is self-service](#)
- If you're a global administrator or billing administrator, see [Power BI licensing for your organization](#).
- If you are a global administrator or billing administrator and don't want users in your organization to use self-service sign-up, see [Enable or disable self-service](#) to learn how to turn it off.

# Power BI service per-user and capacity-based licenses

12/15/2022 • 4 minutes to read • [Edit Online](#)

There are three kinds of Power BI *per-user* licenses: Free, Pro, and Premium Per User (PPU). Which type of license you need is determined by where your content is stored, how you'll interact with that content, and if that content uses Premium features. The other type of license is a Premium *capacity-based* license. PPU and Pro users with access to a [Power BI Premium](#) capacity-based license, can create content in workspaces that are assigned to Premium capacity. PPU and Pro users can then grant colleagues, including free users, access to those Premium workspaces.

## NOTE

A Premium Per User (PPU) workspace is not the same as a Premium capacity workspace.

## Power BI service licenses

The important distinction to understand about licenses is that there are licenses that apply to an individual (per-user) and a license (often also referred to as a *subscription*) that applies to the type of storage capacity that an organization purchases. Each of the three per-user licenses is unique, and each grants access to certain Power BI service features and capabilities. When you combine the features and capabilities of each type of per-user license with the use of a Premium capacity, that is where Pro, PPU, and free license holders gain access to additional features and capabilities - such as sharing, collaboration, and more.

### Free per-user license

Users with free licenses can use the Power BI service to connect to data and create reports and dashboards for their own use. They can't use the Power BI sharing or collaborating features with others, or publish content to other people's workspaces. However, Pro and PPU users can share content and collaborate with free users if the content is saved in workspaces hosted in Premium capacity. To learn more about workspaces, see [Types of workspaces](#). To learn more about features available to users with a free license, see [Power BI service feature list](#).

### Pro license

Power BI Pro is an individual per-user license that lets users create content and also read, and interact with content that others have published to the Power BI service. Users with this license type can share content and collaborate with other Power BI Pro users. Only Power BI Pro users can publish or share content with other Pro users or consume content that's created by other Pro users, unless a Power BI Premium capacity hosts that content. If a Power BI Premium capacity hosts the content, then Pro users can share content and collaborate with free and PPU users too.

### Premium per user (PPU) license

A PPU per-user license provides the license holder with all of the capabilities of Power BI Pro plus access to most Premium capacity-based features. A Power BI PPU license unlocks access to a variety of features, capabilities, and types of content that are only available through Premium. This access is limited to the PPU license holder and other colleagues who also have a PPU license. For example, in order to collaborate and share content in a PPU workspace, all users must have a PPU license.

When using a PPU license, content created by a PPU licensed user can only be shared with other users that have a PPU license, *unless* that content is specifically put in a workspace hosted in Premium capacity. The table below

summarizes the basic capabilities of each license type.

## Premium capacity

A capacity-based Premium license (often referred to as a Premium *subscription*) allows Pro or PPU users to create and save content in Premium capacity workspaces. They can then share that workspace with colleagues who have any license type. Only users with a Pro or PPU license can create and save content in Premium capacities, and only if their organization has purchased Premium capacity.

To discover more about Power BI Premium, see [What is Power BI Premium?](#)

LICENSE TYPE	CAPABILITIES WHEN WORKSPACE IS IN SHARED CAPACITY	ADDITIONAL CAPABILITIES WHEN WORKSPACE IS IN PREMIUM CAPACITY
Power BI (free)	Access to content they create for themselves.	Consume content shared with them by Pro or PPU users
Power BI Pro	Publish content to other workspaces, share dashboards, subscribe to dashboards and reports, share with users who have a Pro license	Distribute content to users who have free or PPU licenses
Power BI Premium Per User (PPU)	Publish content to other workspaces, share dashboards, subscribe to dashboards and reports, share with <i>users who have a PPU license</i>	Distribute content to users who have free and Pro licenses

For a comparison of Power BI Pro and Power BI Premium, see the *Power BI features comparison* section of [Power BI pricing](#).

### NOTE

Power BI has released Power BI Premium Gen2, which improves the Power BI Premium experience with improvements in the following:

- Performance
- Per-user licensing. See [Power BI Premium Per User](#) for more information.
- Greater scale
- Improved metrics
- Autoscaling
- Reduced management overhead

For more information about Power BI Premium Gen2, see [What is Power BI Premium Gen2?](#).

To learn more about the capabilities your license provides, see [Feature availability for users with free licenses](#) and [Types of licenses for Power BI consumers](#).

## Next steps

- [Sign up for the Power BI service as an individual](#)
- [Comparing Power BI Desktop and the Power BI service](#)

# What to do if purchasing Power BI Pro is disabled

12/15/2022 • 2 minutes to read • [Edit Online](#)

You've tried to purchase Power BI Pro and received a message that your organization doesn't allow its users to do this. For a variety of reasons, some organizations block members from self-service purchase of Power BI Pro. For example, your organization may have a policy that all licenses and subscriptions are managed by a centralized IT department or help desk.



## Get started with **Power BI Pro**

1

Let's set up your account

Your organization doesn't currently allow its users to purchase Power BI Pro. Contact your IT admin for more information.

2

Tell us about yourself

## Solution

To finish your purchase, contact your IT department or help desk and ask them to [follow these instructions to provide you with a license](#).

## Next steps

[Power BI features by license type](#)

# What to do if sign up is disabled

12/15/2022 • 2 minutes to read • [Edit Online](#)

You've tried to sign up or tried to purchase Power BI and received a message that sign-up is disabled. For various reasons, some organizations block members from self-service sign-up or self-service purchase. For example, your organization may have a policy that all licenses and subscriptions are managed by a centralized IT department or help desk, even free licenses.

## Self-service sign up is disabled

You attempt to sign up and receive a message similar to this:

*We can't finish signing you up. Your IT department has turned off signup for Microsoft Power BI. Contact them to complete signup.*

## Solution

Self-service sign up for Power BI has been disabled. To finish signing up, contact your IT department or help desk and ask them to [follow these instructions to assign you a license](#).

You may also experience this problem if you signed up for Microsoft 365 through a partner. In which case, contact the organization responsible for providing you with Microsoft 365.

# Get Power BI Desktop

12/15/2022 • 9 minutes to read • [Edit Online](#)

With Power BI Desktop, you can build advanced queries, models, and reports that visualize data. You can also build data models, create reports, and share your work by publishing to the Power BI service. Power BI Desktop is a free download.

To get Power BI Desktop, you can use one of the two approaches.

- [Install as an app from the Microsoft Store](#).
- [Download directly, as an executable you download and install on your computer](#).

Either of the two approaches gets the latest version of Power BI Desktop onto your computer. However, there are some differences worth noting, as described in the following sections.

## IMPORTANT

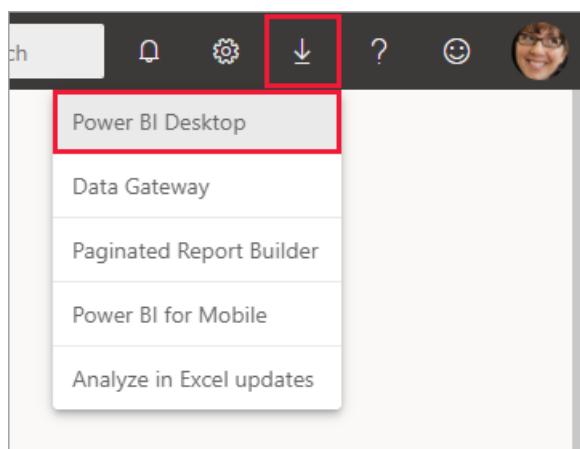
Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the latest version of Power BI Desktop is supported. You will be asked to upgrade the application to the latest version when contacting Support for Power BI Desktop. You can get the latest version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

## Install as an app from the Microsoft Store

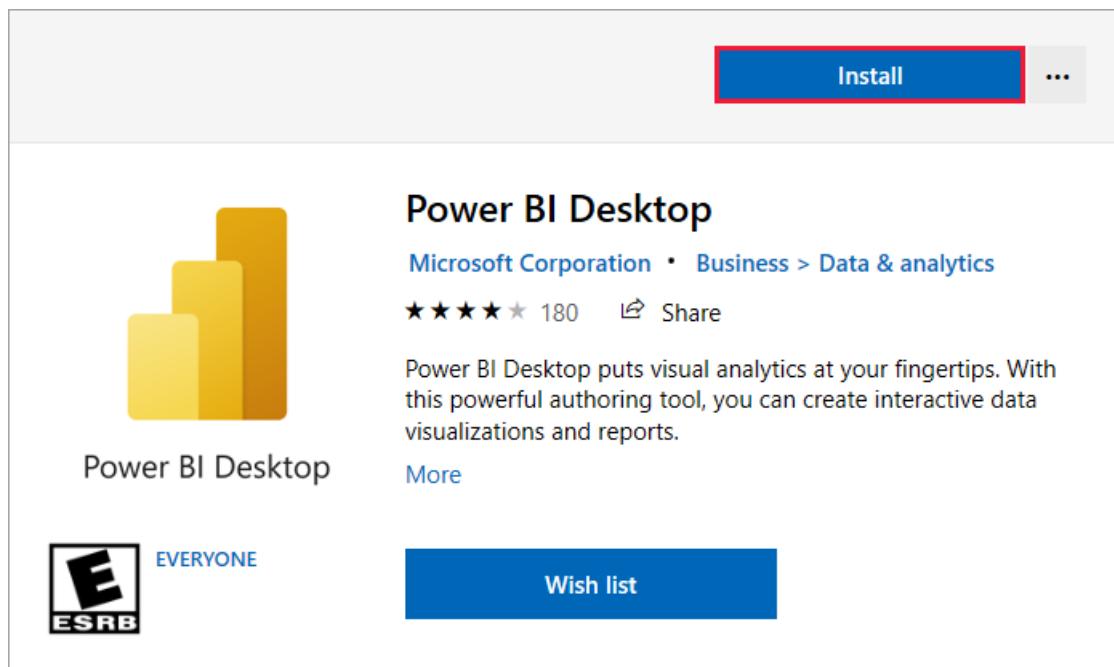
There are a few ways to access the most recent version of Power BI Desktop from the Microsoft Store.

1. Use one of the following options to open the **Power BI Desktop** page of the Microsoft Store:

- Open a browser and go directly to the [Power BI Desktop page](#) of the Microsoft Store.
- From the [Power BI service](#), in the upper right corner, select the **Download** icon and then choose **Power BI Desktop**.



- Go to the [Power BI Desktop product page](#), and then select **Download Free**.
2. After you've landed on the **Power BI Desktop** page of the Microsoft Store, select **Install**.



There are a few advantages to getting Power BI Desktop from the Microsoft Store:

- **Automatic updates:** Windows downloads the latest version automatically in the background as soon as it's available, so your version will always be up to date.
- **Smaller downloads:** Microsoft Store ensures only components that have changed in each update are downloaded to your machine, resulting in smaller downloads for each update.
- **Admin privilege isn't required:** When you download the package directly and install it, you must be an administrator for the installation to complete successfully. If you get Power BI Desktop from the Microsoft Store, admin privilege is *not* required.
- **IT roll-out enabled:** Through the Microsoft Store for Business, you can more easily deploy, or *roll out*, Power BI Desktop to everyone in your organization
- **Language detection:** The Microsoft Store version includes all supported languages, and checks the language used on your computer each time it's launched. This language support also affects the localization of models created in Power BI Desktop. For example, built-in date hierarchies match the language that Power BI Desktop is using when the .pbix file is created.

The following considerations and limitations apply when you install Power BI Desktop from the Microsoft Store:

- If you use the SAP connector, you may need to move your SAP driver files to the *Windows\System32* folder.
- Installing Power BI Desktop from the Microsoft Store doesn't copy user settings from the .exe version. You might have to reconnect to your recent data sources and reenter your data source credentials.

#### NOTE

The Power BI Report Server version of Power BI Desktop is a separate and different installation from the versions discussed in this article. For information about the Report Server version of Power BI Desktop, see [Create a Power BI report for Power BI Report Server](#).

## Download Power BI Desktop directly

To download the Power BI Desktop executable from the Download Center, select **Download** from the [Download Center page](#). Then, specify a 32-bit or 64-bit installation file to download.

 Microsoft | Download Center Windows Office Web browsers More All Microsoft  Cart Sign In

## Choose the download you want

File Name	Size
<input checked="" type="checkbox"/> PBIDesktopSetup_x64.exe	350.6 MB
<input type="checkbox"/> PBIDesktopSetup.exe	320.8 MB

Download Summary:  
KBMGB  
1. PBIDesktopSetup\_x64.exe

Total Size: 350.6 MB

Next

### Install Power BI Desktop after downloading it

You're prompted to run the installation file after you've finished downloading it.

Power BI Desktop ships as a single .exe installation package that contains all supported languages, with a separate .exe file for the 32-bit and 64-bit versions. The .msi packages are discontinued, requiring the .exe executable for installation. This approach makes distribution, updates, and installation (especially for administrators) much easier and more convenient. You can also use command-line parameters to customize the installation process, as described in [Using command-line options during installation](#).

After you launch the installation package, Power BI Desktop installs as an application and runs on your desktop.

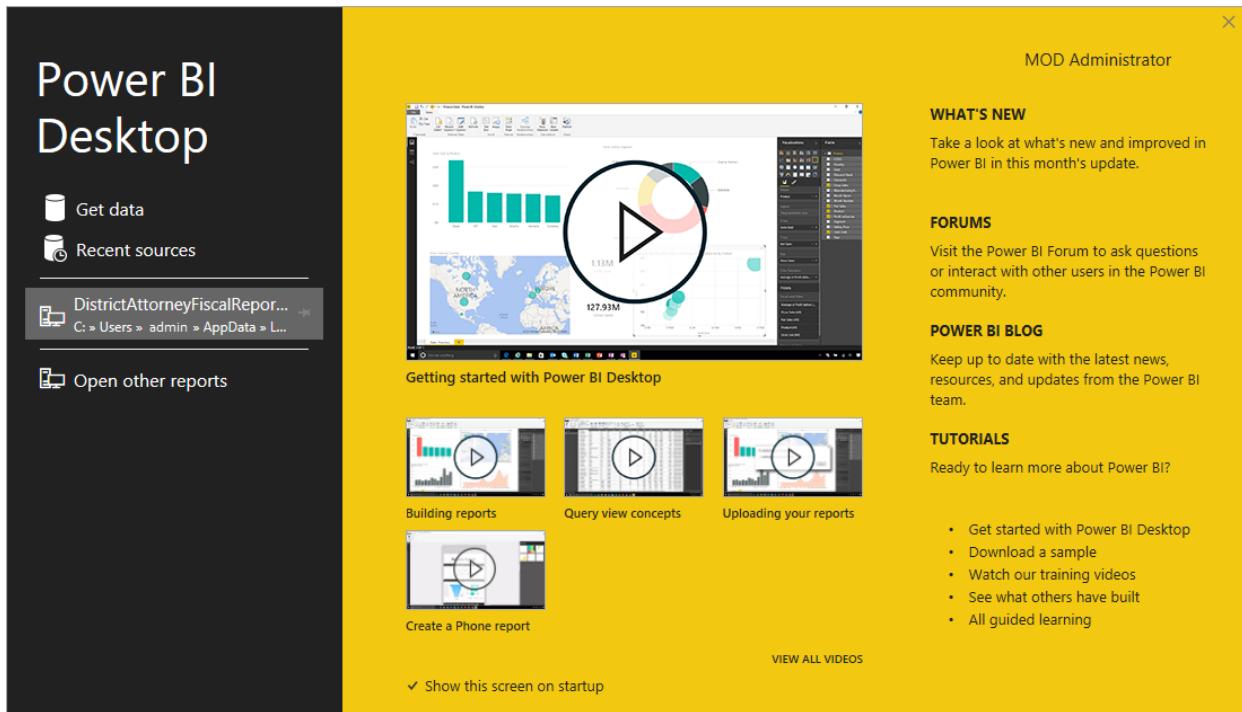


#### NOTE

Installing the downloaded (MSI) version (deprecated), and the Microsoft Store version of Power BI Desktop on the same computer (sometimes referred to as a *side-by-side* installation) is not supported. Manually uninstall Power BI Desktop before you download it from the Microsoft Store.

# Using Power BI Desktop

When you launch Power BI Desktop, a welcome screen is displayed.



If you're using Power BI Desktop for the first time (that is, the installation isn't an upgrade), you're prompted to fill out a form or sign in to the Power BI service before you can continue.

From there, you can begin creating data models or reports, then share them with others on the Power BI service. Check out the [Next steps](#) section for links to guides to help you get started using Power BI Desktop.

## Minimum requirements

The following list provides the minimum requirements to run Power BI Desktop:

### IMPORTANT

Power BI Desktop is no longer supported on Windows 7.

- Windows 8.1 / Windows Server 2012 R2, or later
- .NET 4.6.2 or later
- Internet Explorer 11 or later
- Memory (RAM): At least 2 GB available, 4 GB or more recommended.
- Display: At least 1440x900 or 1600x900 (16:9) required. Lower resolutions such as 1024x768 or 1280x800 aren't supported, as certain controls (such as closing the startup screen) display beyond those resolutions.
- Windows display settings: If you set your display settings to change the size of text, apps, and other items to more than 100%, you may not be able to see certain dialogs that you must interact with to continue using Power BI Desktop. If you encounter this issue, check your display settings in Windows by going to **Settings > System > Display**, and use the slider to return display settings to 100%.
- CPU: 1 gigahertz (GHz) 64-bit (x64) processor or better recommended.
- WebView2, if not automatically installed with Power BI Desktop or uninstalled. [Download and run the installer for WebView2.](#)

**NOTE**

We recommend using a client version of Windows such as Windows 10, rather than Windows Server. For example, Power BI Desktop does not support using Internet Explorer Enhanced Security Configuration as it will stop Power BI Desktop from signing in to the Power BI service.

## Considerations and limitations

We want your experience with Power BI Desktop to be great. Because there may be occasions when you run into an issue with Power BI Desktop, this section contains solutions or suggestions to address these issues.

### Using command-line options during installation

When you install Power BI Desktop, you can set properties and options with command-line switches. These settings are especially useful for administrators who manage or facilitate the installation of Power BI Desktop across organizations. These options apply to .msi and .exe installations.

COMMAND-LINE OPTION	BEHAVIOR
-q, -quiet, -s, -silent	Silent install
-passive	Show the progress bar only during installation
-norestart	Suppress the computer restart requirement
-forcerestart	Restart the computer after installation without a prompt
-promptrestart	Prompt the user if computer restart is required (default)
-l<>, -log<>	Log the installation to a specific file, with the file specified in <>
-uninstall	Uninstall Power BI Desktop
-repair	Repair the installation (or install if it's not currently installed)
-package, -update	Install Power BI Desktop (default, as long as -uninstall or -repair aren't specified)

You can also use the following syntax parameters, which you specified with a *property = value* syntax:

PARAMETER	MEANING
ACCEPT_EULA	Requires a value of 1 to automatically accept the EULA
ENABLECXP	A value of 1 enrolls in the customer experience program that captures telemetry on usage of the product
INSTALLDESKTOPSHORTCUT	A value of 1 adds a shortcut to the Desktop
INSTALLOCATION	File path to where you want it installed

PARAMETER	MEANING
LANGUAGE	The locale code (for example, en-US, de-DE, pr-BR) to force the default language of the application. If you don't specify the language, Power BI Desktop displays the Windows OS language. You can change this setting in the <b>Options</b> dialog.
REG_SHOWLEADGENDIALOG	A value of 0 disables showing the dialog that appears before you've signed in to Power BI Desktop.
DISABLE_UPDATE_NOTIFICATION	A value of 1 disables update notifications.

For example, you can run Power BI Desktop with the following options and parameters to install without any user interface, using the German language:

```
-quiet LANG=de-DE ACCEPT_EULA=1
```

### Installing Power BI Desktop on remote machines

If you're deploying Power BI Desktop to your users with a tool that requires a Windows installer file (.msi file), you can extract the .msi file from the Power BI Desktop installer .exe file. Use a third-party tool, such as WiX Toolset.

#### NOTE

As a third-party product, WiX Toolset options might change without notice. Check their documentation for the most up-to-date information, and contact their user mailing list for help.

1. On the computer where you downloaded the Power BI Desktop installer, install the latest version of the [WiX Toolset](#).
2. Open a command-line window as an administrator and navigate to the folder where you installed WiX Toolset.
3. Run the following command:

```
Dark.exe <path to Power BI Desktop installer> -x <output folder>
```

For example:

```
Dark.exe C:\PBIDesktop_x64.exe -x C:\output
```

The output folder contains a folder named *AttachedContainer*, which includes the .msi files.

Upgrading an install from an .exe to a .msi that you've extracted from an .exe is not supported. In order to make this upgrade, first you'll need to uninstall the older version of Power BI Desktop that you have.

#### IMPORTANT

Power BI Desktop is not supported in Virtualized Environment (eg. Citrix).

### Issues when using previous releases of Power BI Desktop

Some users may encounter an error message similar to the following message when they use an outdated version of Power BI Desktop:

*We weren't able to restore the saved database to the model*

Updating to the current version of Power BI Desktop usually solves this issue.

## Disabling notifications

We recommend updating to the most recent version of Power BI Desktop to take advantage of advances in features, performance, stability, and other improvements. Some organizations may not want users to update to each new version. You can disable notifications by modifying the registry with the following steps:

1. In the Registry Editor, navigate to the **HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Microsoft Power BI Desktop** key.
2. Create a new **REG\_DWORD** entry in the key with the following name: **DisableUpdateNotification**.
3. Set the value of that new entry to 1.
4. Restart your computer for the change to take effect.

## Power BI Desktop loads with a partial screen

In certain circumstances, including certain screen resolution configurations, some users may see Power BI Desktop render content with large black areas. This issue is generally a result of recent operating system updates that affect how items are rendered, rather than a direct result of how Power BI Desktop presents content. Follow these steps to address this issue:

1. Press the **Start** key and enter *blurry* into the search bar that appears.
2. In the dialog that appears, select the option: **Let Windows fix apps that are blurry**.
3. Restart Power BI Desktop.

This issue may resolve after later Windows updates are released.

## Next steps

After you've installed Power BI Desktop, see the following content to help you get up and running quickly:

- [What is Power BI Desktop?](#)
- [Query overview in Power BI Desktop](#)
- [Data sources in Power BI Desktop](#)
- [Connect to data in Power BI Desktop](#)
- [Shape and combine data in Power BI Desktop](#)
- [Common query tasks in Power BI Desktop](#)

# Supported languages and countries/regions for Power BI

12/15/2022 • 7 minutes to read • [Edit Online](#)

This article covers supported languages and countries/regions for the Power BI service, Power BI Desktop, and Power BI documentation.

## Countries and regions where Power BI is available

For a list of countries and regions where Power BI is available, see the [international availability list](#).

## Languages for the Power BI service

The Power BI service (in the browser) is available in the following 44 languages:

- Arabic
- Basque - Basque
- Bulgarian - Български
- Catalan - català
- Chinese (Simplified) - 中文(简体)
- Chinese (Traditional) - 中文(繁體)
- Croatian - hrvatski
- Czech - čeština
- Danish - dansk
- Dutch - Nederlands
- English - English
- Estonian - eesti
- Finnish - suomi
- French - français
- Galician - galego
- German - Deutsch
- Greek - Ελληνικά
- Hebrew
- Hindi - □□□□□
- Hungarian - magyar
- Indonesian - Bahasa Indonesia
- Italian - italiano
- Japanese - 日本語
- Kazakh - Қазақ
- Korean - 한국어
- Latvian - latviešu
- Lithuanian - lietuvių
- Malay - Bahasa Melayu
- Norwegian (Bokmål) - norsk (bokmål)
- Polish - Polski

- Portuguese (Brazil) - Português
- Portuguese (Portugal) - português
- Romanian - română
- Russian - Русский
- Serbian (Cyrillic) - српски
- Serbian (Latin) - srpski
- Slovak - slovenčina
- Slovenian - slovenski
- Spanish - español
- Swedish - svenska
- Thai - ไทย
- Turkish - Türkçe
- Ukrainian - українська
- Vietnamese - Tiếng Việt

### **Report or dashboard subscription language**

When you create a subscription for a report or dashboard, you may be surprised to see that the subscription is in U.S. English, even though Power BI is in another language. If so, you need to specify a language for your browser. See [The language in my subscription is not correct](#) in the article "Troubleshoot Power BI subscriptions."

## Languages for Power BI Desktop

Power BI Desktop is available in the same languages as the Power BI service, except Hebrew and Arabic. Desktop doesn't support right-to-left languages.

### **What's translated**

Power BI translates menus, buttons, messages, and other elements of the experience into your language. For example, Power BI translates report content such as automatically generated titles, filters, and tooltips. However, your data isn't automatically translated. Inside reports, the layout of visuals doesn't change if you're using a right-to-left language such as Hebrew.

At this time, a few features are available in English only:

- Dashboards and reports that Power BI creates when you connect to services such as Microsoft Dynamics CRM, Google Analytics, and Salesforce. You can still create your own dashboards and reports in your own language.
- Exploring your data with Q&A.

#### **NOTE**

The [auto date/time feature](#) will generate localized month names using the "MMMM" format string. Since most Eastern Asian languages use "OOOO" as the format string, the month names generated by the auto date/time feature will not be localized to those languages.

Stay tuned as we work to bring additional features to other languages.

### **Choose your language in the Power BI service**

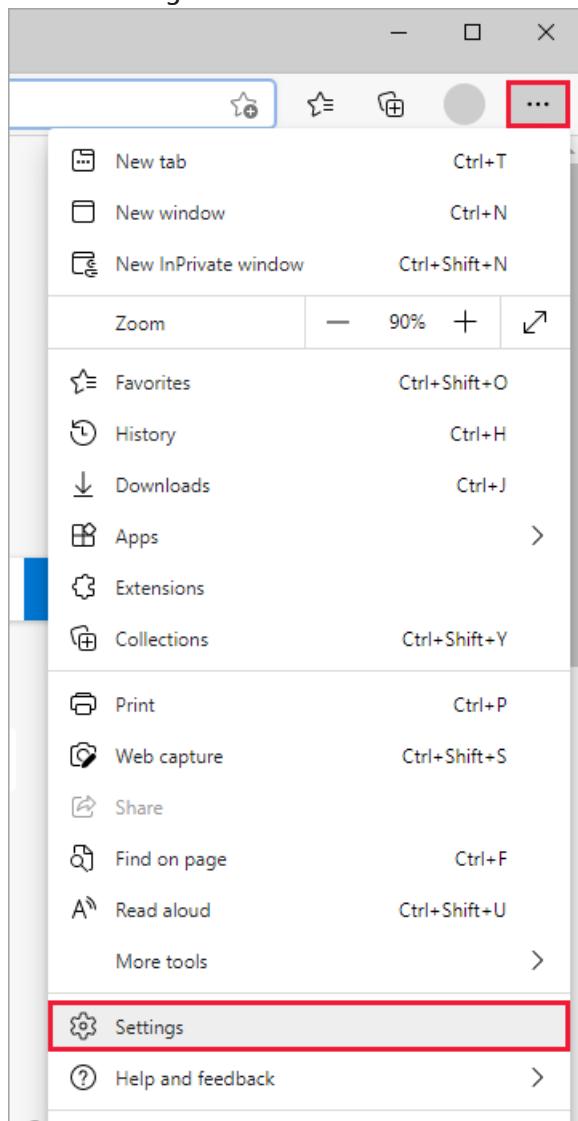
1. In the Power BI service, select the **Settings** icon  > **Settings**.
2. On the **General** tab, select **Language**.
3. Use the language already set for your browser, or select a separate language for the Power BI service.

### **Choose your language in the browser**

Power BI detects your language based on the language preferences on your computer. The way you access and change these preferences may vary depending on your operating system and browser. Here's how to access these preferences from Microsoft Edge and Google Chrome.

#### Microsoft Edge (version 91)

1. Select the **Settings and more** ellipses (...) from the upper right corner of your browser window, and choose **Settings**.



2. Select the **Settings** icon in the upper left corner of your browser window, and choose **Languages**.

# Settings

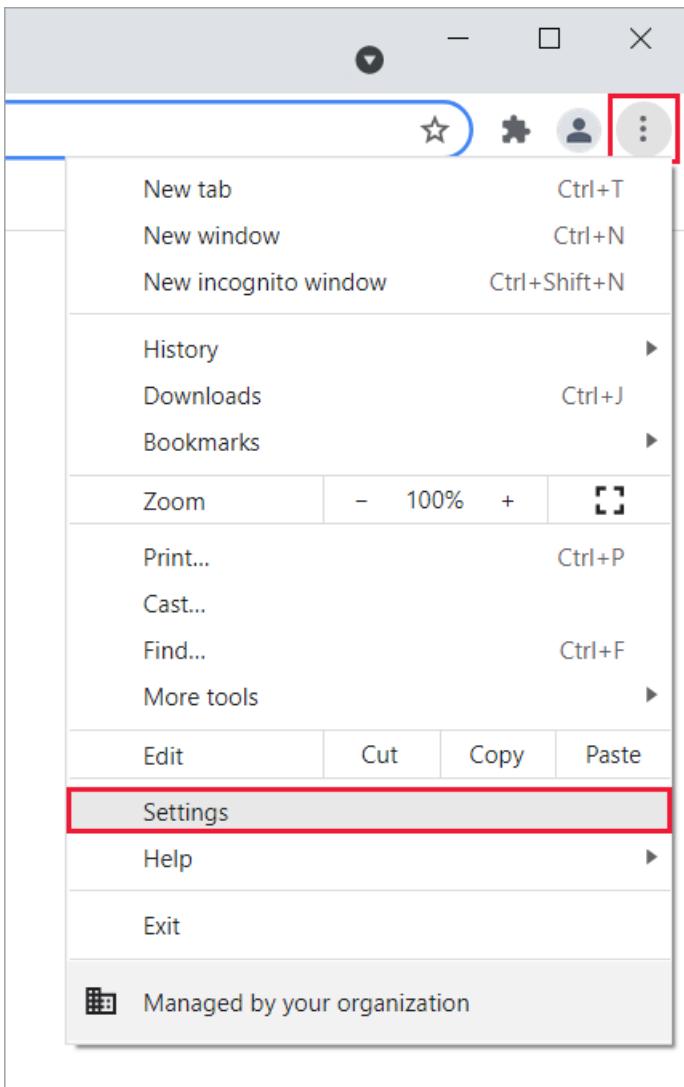
 Search settings

-  Profiles
-  Privacy, search, and services
-  Appearance
-  On startup
-  New tab page
-  Share, copy, and paste
-  Cookies and site permissions
-  Default browser
-  Downloads
-  Family
-  Languages
-  Printers

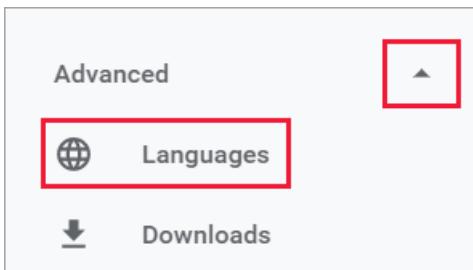
3. Select your preferred language.

## Google Chrome (version 91)

1. Select the menu button in the upper right corner of your browser window, and choose **Settings**.



2. Expand **Advanced**, and choose **Languages**.



3. To add a new language, select **Add languages**.

You may need to close and reopen your browser to see the change.

## Choose the language or locale of Power BI Desktop

You have two ways of getting Power BI Desktop: You can download it as a standalone installer, or install it from the Windows Store.

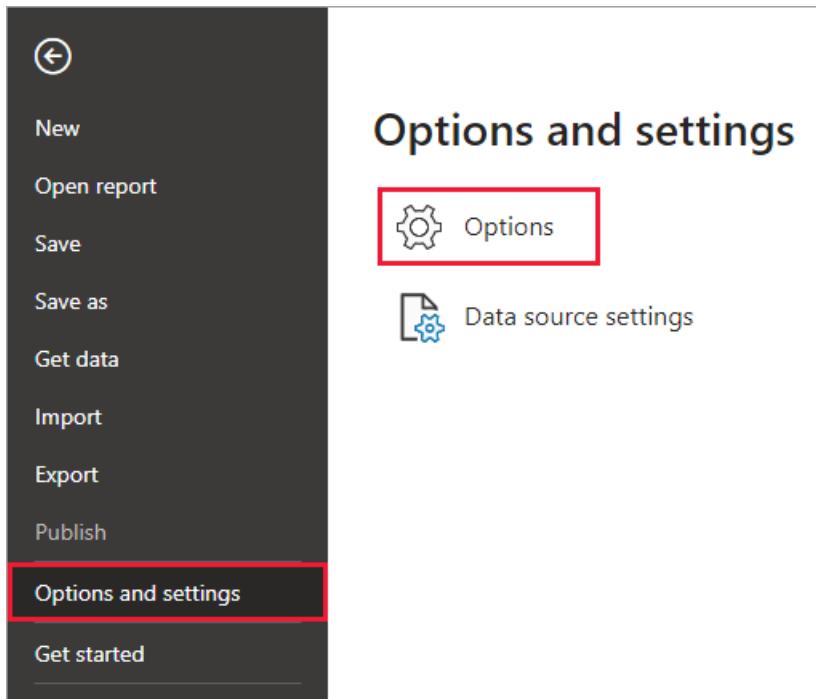
- When you install Power BI Desktop from the Windows Store, it installs all the languages (currently, 42 languages) and by default shows the language that corresponds to the Windows default language.
- When you download Power BI Desktop as a standalone installer, you choose the default language when you run the installer. You can change it at a later date.
- You can also [choose a locale to be used when importing data](#) for a specific report.

#### **NOTE**

If you're installing the version of Power BI Desktop that's optimized for Power BI Report Server, you choose the language when you download. See [Install Power BI Desktop optimized for Power BI Report Server](#) for details.

### **Choose a language for Power BI Desktop**

1. Install Power BI Desktop [from the Windows Store](#), or as a [standalone installer](#).
2. To change the language, open Desktop and in the upper left corner select **File > Options and settings > Options**.



3. Select **Regional settings** and set or change your language preferences.

Language support in Power BI Desktop is limited to the languages displayed in the Application Language dropdown.

### **Verify Power BI Desktop default number and date formatting**

Power BI Desktop gets its default number and date formatting from the Windows Region settings. You can check or change those settings, if needed.

1. On the Windows menu select **Settings**
2. In Windows Settings, select **Time & language**.

## Windows Settings

  **System**  
Display, sound, notifications, power **Devices**  
Bluetooth, printers, mouse **Phone**  
Link your Android, iPhone **Network & Internet**  
Wi-Fi, airplane mode, VPN **Personalization**  
Background, lock screen, colors **Apps**  
Uninstall, defaults, optional features **Accounts**  
Your accounts, email, sync, work, other people **Time & Language**  
Speech, region, date **Gaming**  
Xbox Game Bar, captures, Game Mode **Ease of Access**  
Narrator, magnifier, high contrast **Search**  
Find my files, permissions **Privacy**  
Location, camera, microphone **Update & Security**  
Windows Update, recovery, backup

3. Select **Region** > **Additional date, time, and regional settings**. If you don't see this option, select **Change data formats**, and then **Related settings**.

The screenshot shows the Windows Settings interface. On the left, a sidebar lists 'Time & Language' options: 'Date & time', 'Region' (which is selected and highlighted with a red box), 'Language', and 'Speech'. The main content area is titled 'Region' and shows the 'Country or region' set to 'United States'. A note states: 'Windows and apps might use your country or region to give you local content.' Below this is the 'Regional format' section, which displays the current format as 'English (United States)' and a dropdown menu showing 'Recommended [English (United States)]'. A note below says: 'Windows formats dates and times based on your language and regional preferences.' The 'Regional format data' section lists calendar, first day of week, short date, long date, short time, and long time settings. At the bottom, there are links for 'Change data formats' and 'Related settings' (which is also highlighted with a red box). A link to 'Additional date, time & regional settings' is also present.

4. In Clock and Region, select Change date, time, or number formats.

The screenshot shows the Control Panel under 'Clock and Region'. The left sidebar lists: 'Control Panel Home', 'System and Security', 'Network and Internet', 'Hardware and Sound', 'Programs', and 'User Accounts'. The right pane shows 'Date and Time' and 'Region' options. The 'Region' option is highlighted with a red box and has a sub-link 'Change date, time, or number formats'.

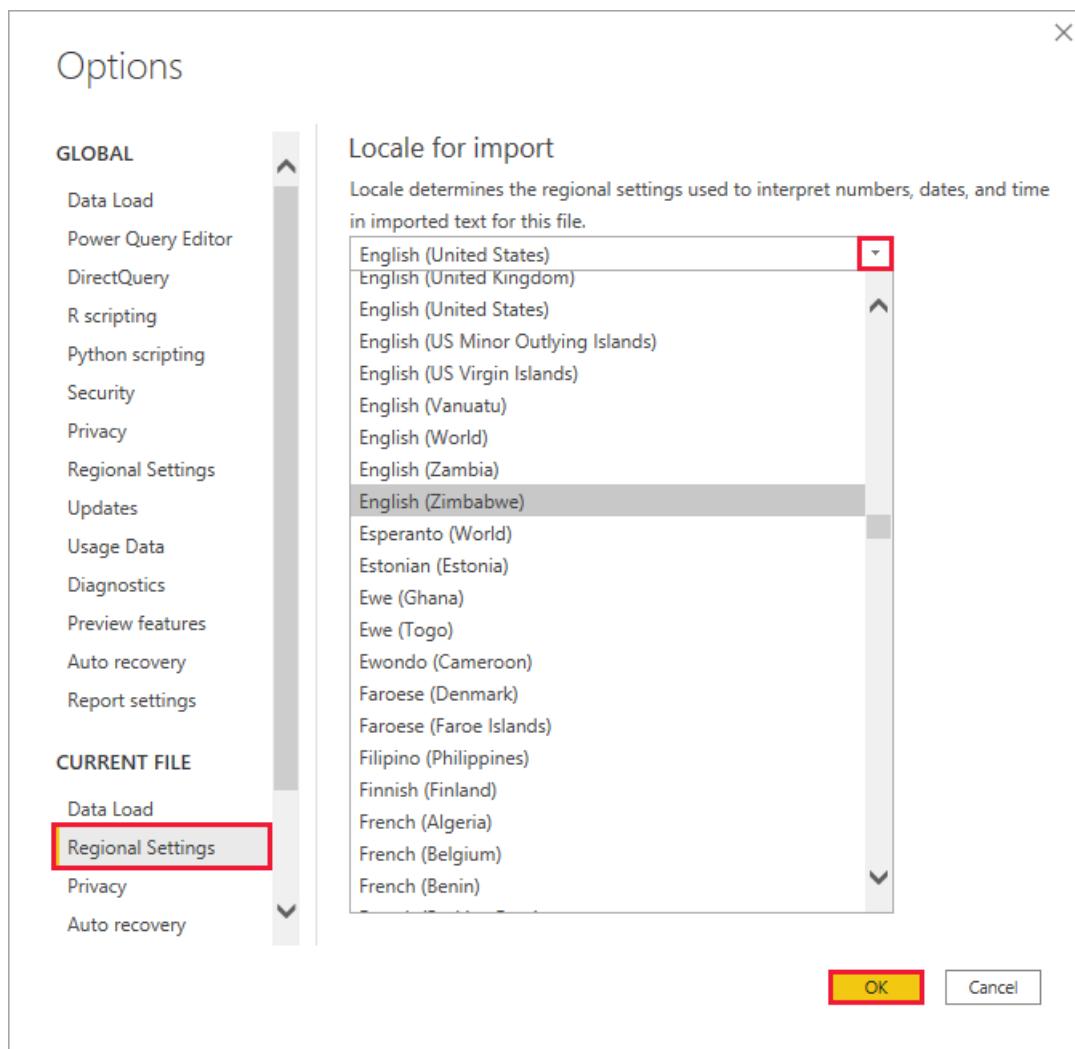
5. Make sure Match Windows display language is selected, or change it if necessary.

The screenshot shows the 'Region' dialog box. It has tabs for 'Formats' and 'Administrative'. Under 'Formats', the 'Format' is set to 'English (United States)'. A dropdown menu for 'Match Windows display language (recommended)' is highlighted with a red box.

## Choose the locale for importing data into Power BI Desktop

Whether you download Power BI Desktop or install it from the Windows Store, you can choose a locale for a specific report to be something other than the locale in your version of Power BI Desktop. The locale changes the way Power BI interprets data when it's imported from your data source. For example, is "3/4/2017" interpreted as 3 April or March 4?

1. In Power BI Desktop, go to File > Options and settings > Options.
2. Under Current file, select Regional Settings.
3. In the Locale for import box, select a different locale.



4. Select OK.

## Choose the language for the model in Power BI Desktop

Besides setting the language for the Power BI Desktop application, you can also set the model language. The model language affects chiefly two things:

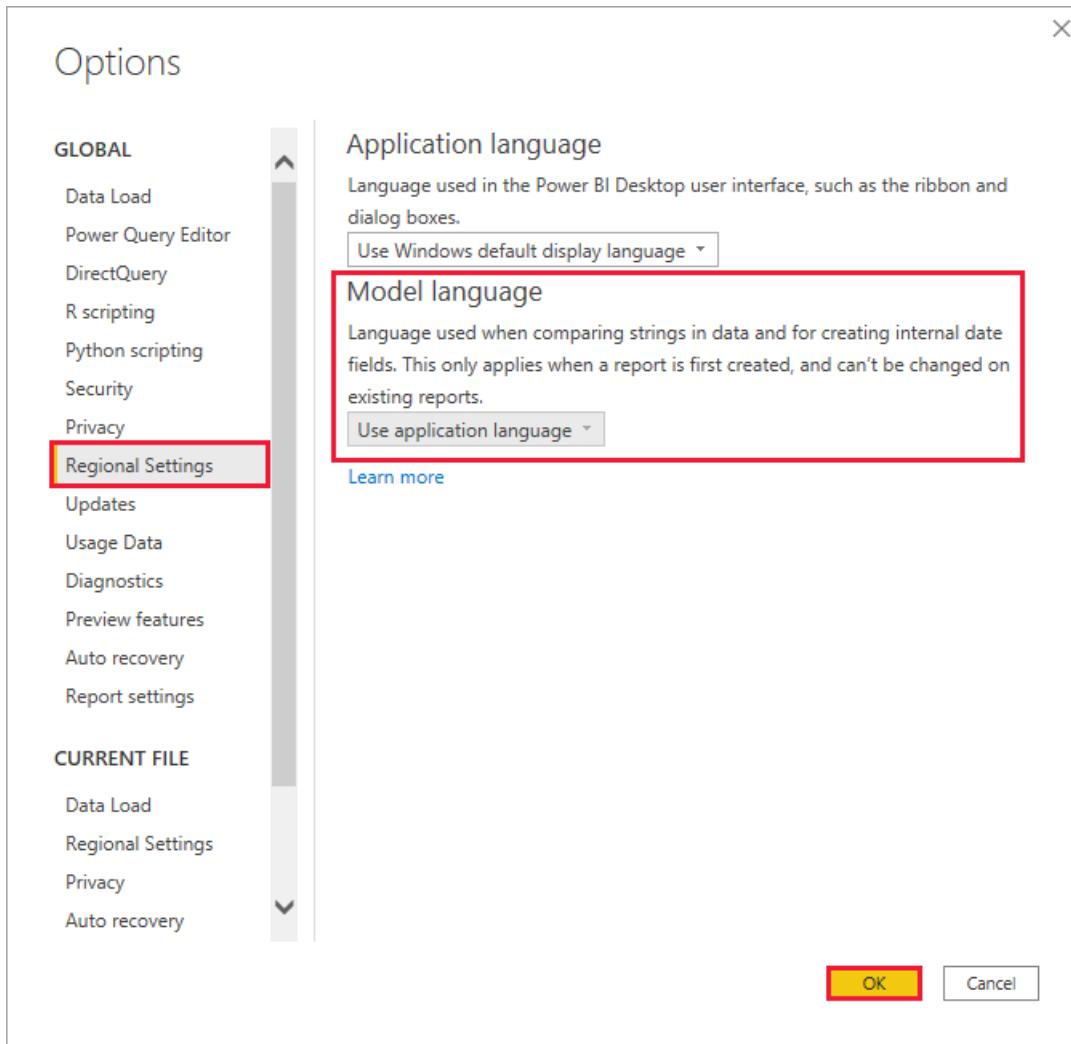
- How we compare and sort strings. For example, because Turkish has two of the letter i, depending on the collation of your database, the two can end up in different orders when sorting.
- The language Power BI Desktop uses when creating hidden date tables from date fields. For example, fields are called Month/Monat/Mois, and so on.

#### NOTE

The Power BI model currently uses a locale that is not case-sensitive (or kana-sensitive) so "ABC" and "abc" will be treated as equivalent. If "ABC" is loaded into the database first, other strings that differ only by case such as "Abc" won't be loaded as a separate value.

Here's how to set the model language.

1. In Power BI Desktop, go to File > Options and settings > Options.
2. Under Global, select Regional Settings.
3. In the Model language box, select a different language.



#### NOTE

Once created, the language of a Power BI model can't be changed.

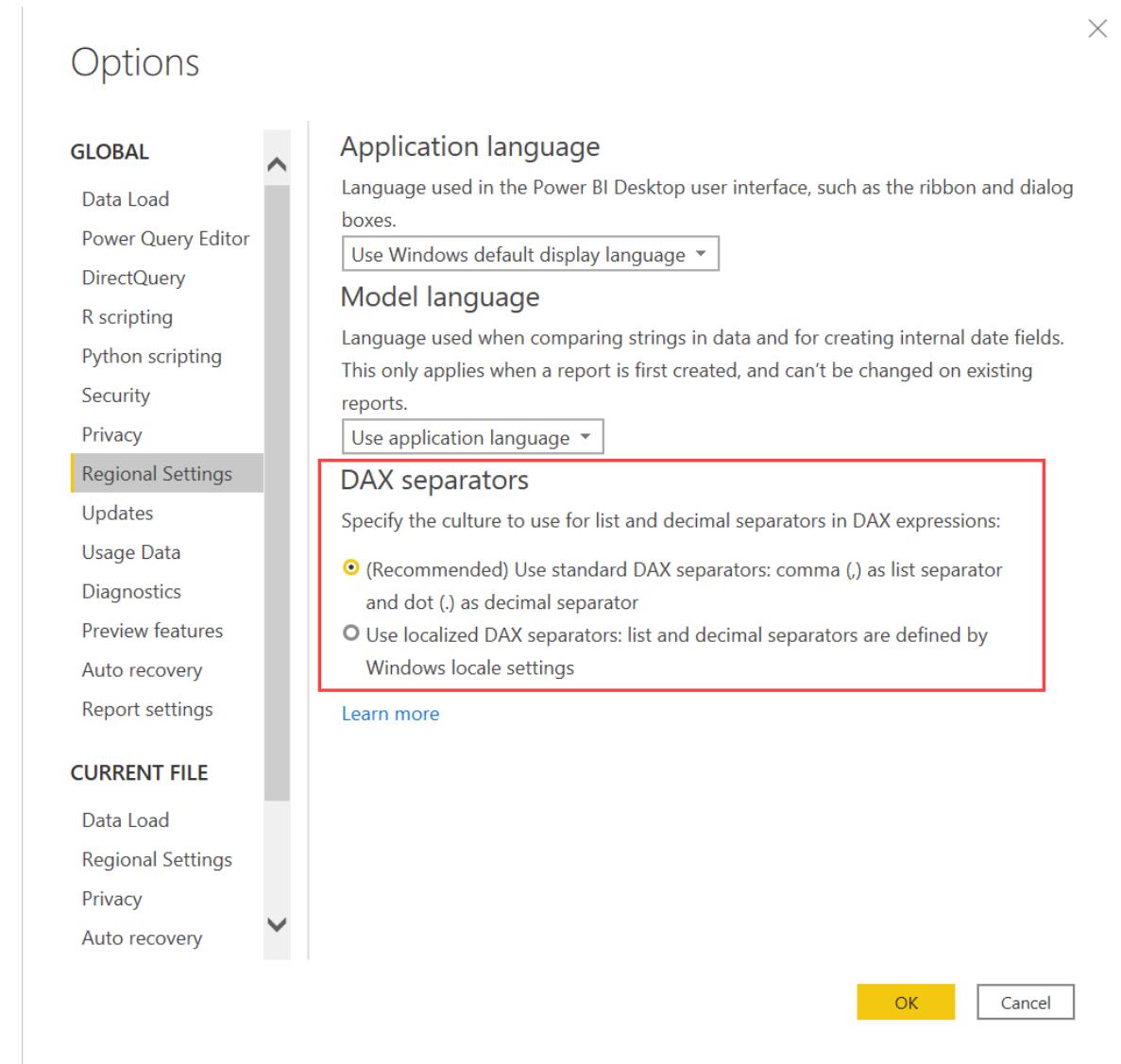
### Choose the DAX separators in Power BI Desktop

By default, DAX uses commas (,) to separate items in a list and periods (.) to indicate the decimal place in a number. While we do recommend using the defaults, you can use the DAX separators based on your Windows locale settings.

Here's how to make Power BI Desktop use localized DAX separators:

1. In Power BI Desktop, go to File > Options and settings > Options.

2. Under Global, select Regional Settings.
3. Under DAX separators select Use localized DAX separators.



#### NOTE

The **DAX separators** section won't be shown if your Windows locale settings are set to "English US".

## Languages for the help documentation

Help is localized in these 10 languages:

- Chinese (Simplified) - 中文(简体)
- Chinese (Traditional) - 中文(繁體)
- French - français
- German - Deutsch
- Italian - italiano
- Japanese - 日本語
- Korean - 한국어
- Portuguese (Brazil) - Português
- Russian - Русский
- Spanish - español

## Next steps

- Are you using one of the Power BI mobile apps? See [Supported languages in the Power BI mobile apps](#) for details.
- Questions? Try asking the [Power BI Community](#).
- Still have an issue? Visit the [Power BI support page](#).

# Supported browsers for Power BI

12/15/2022 • 2 minutes to read • [Edit Online](#)

Power BI is designed to work with any of the supported modern browsers mentioned below. However, performance differs depending on your choice of a browser. If you're using Internet Explorer in particular, which is no longer supported by Power BI, you might encounter worse performance. We strongly recommend a supported modern browser, like Microsoft Edge. If you still encounter unacceptable performance, test other supported modern browsers to see if they provide better results for your Power BI solution.

Power BI supports these browsers on all platforms where they're available:

- Microsoft Edge.
- Chrome desktop latest version.
- Safari Mac latest version.
- Firefox desktop latest version. Firefox might change the fonts used in Power BI.

## NOTE

Power BI doesn't run in any browsers in iOS10 or previous versions.

## Fonts

Power BI uses the Segoe UI font for text as its default, and the Din font for numbers, and other fonts when creating reports, dashboards, and other items. These fonts might not be available on non-Windows computers such as Macs. As a result the font, alignment of items, and visuals for the same report look different when viewed on a Windows computer versus a Mac.

The Calibri and Cambria fonts are only installed on Macs that have Microsoft Office installed. They aren't included in the default set of fonts on Macs.

If you're creating reports viewed on Mac computers, select fonts that display properly on Macs.

The following links provide information about which fonts are available on Macs. The links aren't maintained by Microsoft, and are provided only for reference and further reading.

- [List of typefaces included with macOS](#)
- [Where to find Calibri and Cambria for Macs](#)
- [How to fix missing Calibri, Cambria and Segoe UI fonts on a Mac](#)

## Next steps

- [What is Power BI?](#)
- Ask the [Power BI Community](#)
- Still have an issue? Visit the [Power BI support page](#)

# Power BI videos

12/15/2022 • 2 minutes to read • [Edit Online](#)

You'll find Power BI videos embedded in our documentation, organized into channels and playlists on YouTube, and in the Community video gallery. Our videos come in many different flavors:

- How-to videos that teach you how to *do something* in Power BI
- Conceptual videos that explain things like: terminology, the logic behind how something works, and foundational information
- Video *series* that are combined into a course or certification
- Community webinars that we've hosted in the past
- Customer success stories
- Videos from conferences (Ignite, Data Insights, and more) that we've hosted
- Monthly product update videos that describe and show new features

**NOTE**

Videos might use earlier versions of Power BI Desktop or the Power BI service.

## Subscribe to the Power BI video channel

Our video channel includes curated playlists to make it easy to find the content you need. The "Analyzing and visualizing data" playlist, for example, includes how-to and conceptual videos narrated by Power BI PMs (Project Managers).

We're continually adding to our collection, so [subscribe to the Power BI video channel](#) to be notified when we add new videos. Explore our playlists to discover videos focused on where you are in the business intelligence journey.

## Featured video

In this featured video, we show how to create quick reports in the Power BI service. This new way to create reports lets you paste data directly into the Power BI service, instead of downloading Power BI Desktop.

## Additional videos

Learn about new data protection enhancements:

Learn about new enhancements in Power BI app for Teams:

## Featured playlists

Related Power BI videos are collected into playlists to help you easily find subjects of interest to you. Go to [the Microsoft Power BI playlists on our YouTube channel](#) to explore all our playlists. The list below is a sampling of the topics you'll find featured as playlists:

- [Power BI Desktop](#)
- [Dashboards, Reports, and Design](#)
- [Administration and Governance](#)
- [Analyze and Visualize Data](#)
- [Data Prep and Modeling](#)

## Microsoft Power BI Community videos and webinars

The [Community gallery](#) curates videos from hosted events and from our community members. Explore videos organized by date, top kudo-ed, featured, and live events.

## Next steps

- [Microsoft Learn training for Power BI](#)
- [Watch Power BI demos](#)
- Discover [videos from Azure about Power BI Embedded and Synapse Analytics](#)

More questions? Try asking the [Power BI Community](#)

# Power BI webinars

12/15/2022 • 7 minutes to read • [Edit Online](#)

Register for our upcoming live webinars or watch our recorded sessions on-demand.

## Upcoming webinars

[Upcoming events from the Power BI community](#)

## Featured webinars

Get started with these popular on-demand webinars:

### **Starter Guide for Power BI Consumers**

by Will Thompson

[Watch now](#)

### **Drive Productivity and Effective Decision-Making with Excel and Power BI**

by Ikechukwu Edeagu

[Watch now](#)

### **Unleash Your Dynamics 365 Data with Azure Synapse Analytics and Power BI**

[Watch now](#)

### **Quickly transform your Organization with a Data-Driven culture through Power BI**

by Lukasz Pawlowski

[Watch now](#)

### **Power BI: Security and Governance for Your Organization**

by Anton Fritz and Rick Xu

[Watch now](#)

### **Power BI Apps: Distribute Content to Your Organization**

by Anshul Rampal

[Watch now](#)

### **Power BI 101: Create Reports Quickly and Effectively**

by Amanda Rivera

[Watch now](#)

### **Power BI How-to: Analyze Real-Time Data with Streaming Dataflows**

by Mohammad Ali and Jeroen ter Heerdt

[Watch now](#)

### **Webinar Series: Mastering Data Modeling with Power BI**

#### **Episode 1 - Data Modeling 101: Increasing the Impact of Power BI**

by Jeroen ter Heerdt and Marc Lelijveld

[Watch now](#)

### **Webinar Series: Mastering Data Modeling with Power BI**

#### **Episode 2 - Learn Advanced Data Modeling with Power BI**

by Jeroen ter Heerdt and Marc Lelijveld

[Watch now](#)

## **Webinar Series: Mastering Data Modeling with Power BI**

### **Episode 3 - Data Modeling for Experts with Power BI**

by Jeroen ter Heerdt and Marc Lelijveld

[Watch now](#)

## **Webinar Series: Data Modeling with Power BI**

### **Episode 4 - Calculation Groups and Composite Models**

[Watch now](#)

## **Behind the Scenes with the Power BI Team**

by Jeroen ter Heerdt and Miguel Martinez

[Watch now](#)

## **Enable Greater Data Agility with Azure Purview and Power BI**

by Chandru Sugunan and Gaurav Malhotra

[Watch now](#)

## **Best Practices for Deploying Power BI Embedded**

by Alon Baram

[Watch now](#)

## **Harness Power BI for Self Service Data Prep with Dataflows**

by Charles Webb

[Watch now](#)

## **Understanding Power BI Premium Gen 2**

by David Magar

[Watch now](#)

## **Demystifying Power BI datasets**

by Peter Myers and Chris Webb

[Watch now](#)

## **Securing your data in motion and at rest with Power BI**

by Anton Fritz and Yitzhak Kesselman

[Watch now](#)

## **Quickstart Guide to Navigating Power BI**

by Miguel Martinez

[Watch now](#)

## **Data-driven Insights for Real-time Decisions and Stronger Customer Connections**

by Shruti Shukla and Chandra Stevens

[Watch now](#)

## **Get up and Running Quickly with Power BI**

by Miguel Martinez, Microsoft

[Watch now](#)

## **Drive a Remote Data Culture with Power BI and Microsoft Teams**

by Lukasz Pawlowski

[Watch now](#)

## **Better Together: 5 Benefits Excel Users Will Get From Using Power BI**

by Miguel Martinez and Carlos Otero

[Watch now](#)

## **Monitor Your Data in Real-time with Microsoft Power BI**

by Miguel Martinez and Peter Myers

[Watch now](#)

**Accelerate Power BI on Azure Data Lake Storage with Dremio**

by Chris Webb and Tomer Shiran [Watch now](#)

**Build Scalable BI Solutions Using Power BI and Snowflake**

by Chris Webb, Craig Collier, and Chris Holliday

[Watch now](#)

**Boost User Satisfaction with Best Practices for Managing BI Content**

by Nimrod Shalit

[Watch now](#)

**From Insight to Action: Driving a Data Culture with Power BI**

by Arun Ulagaratchagan and Amir Netz

[Watch now](#)

**Enable Better Analytics with Power BI Embedded**

by Alon Baram

[Watch now](#)

**How the Miami HEAT Used Power BI to Drive Business Decisions**

by Edson Crevecoeur, Frank Mesa and Xinrou Tan

[Watch now](#)

**Simplify Big Data Prep and Analysis with Power BI**

by Priya Sathy

[Watch now](#)

**Improve Decision-Making with Power BI**

by Kim Manis and Lukasz Pawlowski

[Watch now](#)

## On-demand webinars

Watch recorded sessions at any time.

**Leverage M365 sensitivity labels to improve your Power BI deployment compliance and protect sensitive business data**

by Anton Fritz (Principal Program Manager, Power BI R&D) and Igor Bekerman (Microsoft 365 CxE)

[Register to watch](#)

**Explore the Total Economic Impact of Microsoft Power BI**

by Megan Tomlin, Microsoft and Jonathan Lipsitz, Forrester Consulting

[Watch now](#)

**Analytics in Azure virtual event: Accelerate time to insight with Azure Synapse Analytics**

by Gayle Sheppard and John Macintyre

[Register and watch now](#)

**How Microsoft Is Changing BI Data Protection**

by Anton Fritz and Adi Regev

[Register and watch now](#)

**How to Become an Insights-Driven Business**

by Amir Netz, Microsoft and Boris Evelson, Forrester

[Register and watch now](#)

## **Three Ways AI Is Changing BI**

by Justyna Lucznik

[Register and watch now](#)

## **Power BI and the Future of Modern and Enterprise BI**

by Arun Ulag and Amir Netz

[Register and watch now](#)

## **Nine Trends Shaping the Future of Big Data Analytics**

by Vijay Gopalakrishnan

[Register and watch now](#)

## **Getting Started with Power BI**

by Miguel Martinez

[Register and watch now](#)

## **Get Started with the Power BI Mobile App**

by Maya Shenhav

[Register and watch now](#)

## **Learn to Navigate Your Way Through a Power BI Dashboard in 20 Minutes**

by Miguel Martinez

[Register and watch now](#)

## **Strengthen Your Data Modeling Skills with Power BI**

by Kasper de Jonge

[Register and watch now](#)

## **Using Power BI with Dynamics 365 Finance and Operations**

by Kevin Horlock

[Register and watch now](#)

## **Microsoft Runs on Power BI – Financial Planning & Analysis Made Easy**

by Cory Hrcicirk and Miguel Martinez

[Register and watch now](#)

## **Microsoft Runs on Power BI: Using Power BI in Modern Treasury**

by Pankaj Gudimella and Guru Kirthigavasan

[Register and watch now](#)

## **Supercharge Your Applications Using the Power BI JavaScript API**

by Nimrod Shalit

[Register and watch now](#)

## **Power BI, Excel, and Microsoft 365: Optimize Your Enterprise Data**

by Olaf Hubel and Miguel Martinez

[Register and watch now](#)

## **Simply Compelling—Tips for Better Visualization Design**

by Miranda Li

[Register and watch now](#)

[Browse the library of Power BI on-demand webinars from our community experts.](#)

## **Getting started**

Automate Day-to-Day Business Processes with Power BI, PowerApps, and Power Automate

by Wim Coorevits and Enrique Plaza Garcia

[Register and watch now](#)

### **Best Practices for Managing Power BI Embedded Analytics for Multi-Tenant Deployments**

by Nimrod Shalit

[Register and watch now](#)

### **Power BI: Analytics Done Right**

by Gohul Shanmugalingam

[Register and watch now](#)

### **Make Your Power BI Data Visual: Core Chart Types and How to Use Them**

by Miranda Li

[Register and watch now](#)

### **How to Design Visually Stunning Power BI Reports**

by Charles Sterling

[Watch now](#)

### **The Total Economic Impact of Power Automate and PowerApps**

by Jonathan Lipsitz and Enrique Plaza Garcia

[Register and watch now](#)

### **Better Together: 5 Benefits Excel Users Will Get From Using Power BI**

by Carlos Otero and Miguel Martinez

[Register and watch now](#)

### **Learn about Power BI Embedded in 20 minutes**

by Megan Asarrane and Colin Murphy

[Register and watch now](#)

### **Beyond the Spreadsheet**

by Gohul Shanmugalingam

[Register and watch now](#)

### **Draw the right insights with Power BI and Visio**

by Shakun Grover

[Register and watch now](#)

### **Transforming A Report From Good to GREAT!**

by Reid Havens

[Watch now](#)

## **Partner Solutions Series**

[Watch this series](#)

### **Power BI: How to Get Insights from Your Workday HR Data**

by Iman Eftekhari, Julia Paton from Agile Analytics and Shahram Karimi from QBE Insurance

[Register and watch now](#)

### **Achieving a Win-Win for Consumer Product Goods Manufacturers and Retailers**

by Liz McCreesh from Thorogood

[Register and watch now](#)

### **Transform Customer Data into Retail Success with Power BI**

by Angad Soni from Hitachi Solutions

[Register and watch now](#)

## **Proven Healthcare Solutions to Improve Both Patient Outcomes and Profitability**

by Stephen Cracknell and Stuart Macanliss from US Medical IT

[Register and watch now](#)

## **Manufacturers: Your industry is going through a digital transformation - Maintain leadership by leveraging analytics to maximize profitability**

by Jon Thompson from Blue Margin and Jim Pastor from Elgin Fastener Group

[Register and watch now](#)

## **Visualize public or private datasets with the new Power BI and data.world connector**

by Patrick McGarry and Miguel Martinez

[Register and watch now](#)

## **Boost Your BI with Location Intelligence**

by Scott Ball from Esri and Enrique Plaza from Microsoft

[Register and watch now](#)

## **5 Habits of a Successful Trend Curator - Rohit Bhargava**

by Rohit Bhargava from Non-Obvious

[Register and watch now](#)

# **Community**

Visit the [Community Webinars and Video Gallery](#) for more resources.

## **Power BI Tricks, Tips, and Tools from the owners of PowerBI.Tips**

by Mike Carlo and Seth Bauer

[Watch now](#)

## **Storytelling with your data and Power BI**

by Tristan Malherbe

[Watch now](#)

## **Practical DAX for Power BI**

by Phil Seemark

[Watch now](#)

## **Developing with Power BI Embedding – The April 2018 Update**

by Ted Pattison

[Watch now](#)

## **Power BI security deep dive**

by Kasper de Jonge

[Watch now](#)

## **Ask a Partner: Developing Power BI visuals for Power BI**

by Ted Pattison

[Watch now](#)

# **Advanced Topics**

## **Advanced Analytics with Excel and Power BI**

by Nagasaikiran Kambhampati and Miguel Martinez

[Register to watch](#)

[Download the Advanced Analytics Starter Kit to follow along](#)

[Power BI adoption framework webinar series](#)

by Manu Kanwarpal and Paul Henwood

[Register and watch now - Part 1 - Adoption: Adopt a data-driven culture](#)

[Register and watch now - Part 2 - Governance: Govern your Power BI usage](#)

[Register and watch now - Part 3 - Service Management: Power BI Service Management Insights](#)

[Register and watch now - Part 4 - Security: Keeping your data secure with Power BI](#)

[Register and watch now - Part 5 - Rollout: Successfully rolling out Power BI](#)

**Be a Full Stack Power BI Jedi – A walkthrough of Power BI most advanced features through Star Wars data**

by Gil Raviv

[Watch now](#)

## See also

- [Power BI whitepapers](#)
- [What is Power BI?](#)
- Follow [@MSPowerBI](#) on Twitter
- Subscribe to our [YouTube channel](#)

More questions? [Try asking the Power BI Community](#)

# Previous monthly updates to Power BI Desktop and the Power BI service

12/15/2022 • 172 minutes to read • [Edit Online](#)

This article describes previous updates to **Power BI Desktop** and the **Power BI service**. For the most current month's release, check out [Power BI latest updates](#).

The monthly blog and video updates for Power BI Desktop now also include "what's new" updates for Power BI mobile and the Power BI service. In each section, choose the tab for Power BI Desktop or for the Power BI service. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each update mean the following:

- [video] excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [article] that provides more detail.
- Most features are explained in the monthly update [blog] post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following sections describe previous months' updates to **Power BI Desktop** and the **Power BI service**.

## November 2022 Update (2.111.265.0)

November's updates felt like a family reunion, and we were thankful and grateful for the heaping-tall servings of updates, features, and new capabilities. Please pass the data to this end of the table.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

## **IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

## **IMPORTANT**

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

### **Reporting**

- Unshared and unsynchronized axes for small multiples charts [\[video\]](#) [\[blog\]](#)
- Controlling and customizing labels on Azure Maps [\[video\]](#) [\[blog\]](#)
- Create dynamic slicers using field parameters (Preview) [\[video\]](#) [\[blog\]](#)
- Composite models over Power BI datasets and Analysis Services (Preview) [\[video\]](#) [\[blog\]](#)

### **Modeling**

- Streamline your report authoring experience with Optimize ribbon (Preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- New DAX function: EVALUATEANDLOG [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- New DAX functions: TOCSV and TOJSON [\[video\]](#) [\[blog\]](#) [\[article 1\]](#) [\[article 2\]](#)

### **Data connectivity**

- Many updated data connectors [\[video\]](#) [\[blog\]](#)

## **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

### **Visuals**

- New visuals in AppSource [\[video\]](#) [\[blog\]](#)

### **Others**

- Power BI Desktop infrastructure update (WebView2) [\[video\]](#) [\[blog\]](#)
- New Power BI color accent [\[video\]](#) [\[blog\]](#)

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

### **Power BI monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post.

## **NOTE**

The video might use earlier versions of Power BI Desktop or the Power BI service.

You can also download previous versions of Power BI Desktop if your organization requires it. We always recommend that you use the most recent version of Power BI Desktop, rather than a previous version. All

previous versions have the following limitations:

- Previous releases of Power BI Desktop are not being serviced - you should always use the most recent release for the latest features and updates.
- It may not be possible to open files created or saved in newer releases of Power BI Desktop with previous versions of Power BI Desktop.
- If you receive a warning when loading a report saved in a newer release of Power BI Desktop, then save that report in the previous version, you lose any information related to new features.
- We only archive the English versions of Power BI Desktop.

Select the following links to download this earlier version:

- [November 2022 version of Power BI Desktop - 32-bit](#)
- [November 2022 version of Power BI Desktop - 64-bit](#)

## October 2022 Update (2.110.341.0)

October's updates were scary fun, full of screaming great new features and monstrous improvements.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

### IMPORTANT

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

### IMPORTANT

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

### Reporting

- Reverse stack order for stacked column charts [\[video\]](#) [\[blog\]](#)
- Query performance improvements [\[video\]](#) [\[blog\]](#)
- Power BI Metrics [\[video\]](#) [\[blog\]](#)

## Analytics

- Quick measure suggestions - experimental feature (Preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)

## Modeling

- Relationship editing in the properties pane (Preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- DAX formula bar support for Power BI Desktop model view [\[video\]](#) [\[blog\]](#)

## Data connectivity

- Introducing tenant setting for Power BI datamarts (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

## Visuals

- New visuals in AppSource [\[video\]](#) [\[blog\]](#)

## Others

- Power BI Ideas website enhancements [\[blog\]](#)
- Update to release notes [\[blog\]](#)

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

## Power BI monthly update video

The following video describes each of these updates. You can also watch this video from the blog post.

### NOTE

The video might use earlier versions of Power BI Desktop or the Power BI service.

You can also download previous versions of Power BI Desktop if your organization requires it. We always recommend that you use the most recent version of Power BI Desktop, rather than a previous version. All previous versions have the following limitations:

- Previous releases of Power BI Desktop are not being serviced - you should always use the most recent release for the latest features and updates.
- It may not be possible to open files created or saved in newer releases of Power BI Desktop with previous versions of Power BI Desktop.
- If you receive a warning when loading a report saved in a newer release of Power BI Desktop, then save that report in the previous version, you lose any information related to new features.
- We only archive the English versions of Power BI Desktop.

Select the following links to download this earlier version:

- [October 2022 version of Power BI Desktop - 32-bit](#)
- [October 2022 version of Power BI Desktop - 64-bit](#)

# September 2022 Update (2.109.642.0)

September's updates were crisp and clean, like an autumn walk down a colorful treed pathway where new discoveries are just around each corner. We were all ready to meet friendly new features, joining Power BI classmates for an exciting next round of learning.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

## IMPORTANT

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

## IMPORTANT

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

## Reporting

- Hierarchical axis by default [\[video\]](#) [\[blog\]](#)
- Improved display name for summarized fields [\[video\]](#) [\[blog\]](#)
- Conditional formatting for data labels [\[video\]](#) [\[blog\]](#)
- Translations support for composite models on Power BI datasets and Analysis Services (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Mobile formatting options (general availability) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Information protection update [\[video\]](#) [\[blog\]](#) [\[article\]](#)

## Data connectivity

- Dremio (connector update) [\[video\]](#) [\[blog\]](#)
- Profisee (new connector) [\[video\]](#) [\[blog\]](#)
- Starburst Enterprise (connector update) [\[video\]](#) [\[blog\]](#)

#### **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

## Visuals

- New visuals in AppSource [\[video\]](#) [\[blog\]](#)

## Others

- Paginated reports data preview [\[video\]](#) [\[blog\]](#) [\[article\]](#)

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

### **Power BI monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post.

#### **NOTE**

The video might use earlier versions of Power BI Desktop or the Power BI service.

You can also download previous versions of Power BI Desktop if your organization requires it. We always recommend that you use the most recent version of Power BI Desktop, rather than a previous version. All previous versions have the following limitations:

- Previous releases of Power BI Desktop are not being serviced - you should always use the most recent release for the latest features and updates.
- It may not be possible to open files created or saved in newer releases of Power BI Desktop with previous versions of Power BI Desktop.
- If you receive a warning when loading a report saved in a newer release of Power BI Desktop, then save that report in the previous version, you lose any information related to new features.
- We only archive the English versions of Power BI Desktop.

Select the following links to download this earlier version:

- [September 2022 version of Power BI Desktop - 32-bit](#)
- [September 2022 version of Power BI Desktop - 64-bit](#)

## August 2022 Update (2.108.564.0)

August's updates were like a summertime trip, full of interesting sights and new things to discover that brought a sense of adventure and imaginings of exciting things to come.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

#### **IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

#### **IMPORTANT**

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

#### **Reporting**

- Conditional formatting for data labels [\[video\]](#) [\[blog\]](#)
- New *Select sensitivity label* dialog [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Data loss prevention policy update [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Metric visual (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Mobile formatting now supports text box visuals [\[video\]](#) [\[blog\]](#) [\[article\]](#)

#### **Modeling**

- DAX Editor improvements [\[video\]](#) [\[blog\]](#)

#### **Data connectivity**

- MariaDB (connector update) [\[video\]](#) [\[blog\]](#)
- Google Sheets (connector update) [\[video\]](#) [\[blog\]](#)
- Certified connectors availability in Power BI dataflows and datamarts [\[video\]](#) [\[blog\]](#) [\[article\]](#)

#### **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

#### **Visuals**

- New visuals in AppSource [\[video\]](#) [\[blog\]](#)

#### **Others**

- Visualizing views in Dynamics 365 with Power BI (general availability) [\[video\]](#) [\[blog\]](#)
- More ways to optimize Power BI performance [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Release notes and ideas update [\[blog\]](#)

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

#### **Power BI monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post.

**NOTE**

The video might use earlier versions of Power BI Desktop or the Power BI service.

You can also download previous versions of Power BI Desktop if your organization requires it. We always recommend that you use the most recent version of Power BI Desktop, rather than a previous version. All previous versions have the following limitations:

- Previous releases of Power BI Desktop are not being serviced - you should always use the most recent release for the latest features and updates.
- It may not be possible to open files created or saved in newer releases of Power BI Desktop with previous versions of Power BI Desktop.
- If you receive a warning when loading a report saved in a newer release of Power BI Desktop, then save that report in the previous version, you lose any information related to new features.
- We only archive the English versions of Power BI Desktop.

Select the following links to download this earlier version:

- [August 2022 version of Power BI Desktop - 32-bit](#)
- [August 2022 version of Power BI Desktop - 64-bit](#)

## July 2022 Update (2.107.683.0)

July's updates were a sunny collection of bright spots for Power BI, warming ourselves with all the good things they brought.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

## **IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

## **IMPORTANT**

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

### **Reporting**

- Error bars (generally available) [\[video\]](#) [\[blog\]](#)
- Filled Map for Azure Maps visual [\[video\]](#) [\[blog\]](#)
- Composite models on Power BI datasets and Analysis Services (preview) [\[video\]](#) [\[blog\]](#)
- Bold, italics and underline for text in the header tooltip [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Metric visuals updates [\[video\]](#) [\[blog\]](#)

### **Modeling**

- New DAX function: NETWORKDAYS [\[video\]](#) [\[blog\]](#)
- Support for multi-role RLS in composite model [\[video\]](#) [\[blog\]](#)
- Query performance improvement [\[video\]](#) [\[blog\]](#)

### **Data connectivity**

- Connect to datamarts (preview) [\[video\]](#) [\[blog\]](#)
- Display name support in the Dataverse connector [\[video\]](#) [\[blog\]](#)
- Many connector updates (update) [\[video\]](#) [\[blog\]](#)

## **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

### **Visuals**

- New Power BI visuals' category list in AppSource [\[video\]](#) [\[blog\]](#)
- New visuals in AppSource [\[video\]](#) [\[blog\]](#)
- New visuals available [\[video\]](#) [\[blog\]](#)

### **Others**

- Release notes and ideas update [\[video\]](#) [\[blog\]](#)

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

### **Power BI monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post.

#### NOTE

The video might use earlier versions of Power BI Desktop or the Power BI service.

You can also download previous versions of Power BI Desktop if your organization requires it. We always recommend that you use the most recent version of Power BI Desktop, rather than a previous version. All previous versions have the following limitations:

- Previous releases of Power BI Desktop are not being serviced - you should always use the most recent release for the latest features and updates.
- It may not be possible to open files created or saved in newer releases of Power BI Desktop with previous versions of Power BI Desktop.
- If you receive a warning when loading a report saved in a newer release of Power BI Desktop, then save that report in the previous version, you lose any information related to new features.
- We only archive the English versions of Power BI Desktop.

Select the following links to download this earlier version:

- [July 2022 version of Power BI Desktop - 32-bit](#)
- [July 2022 version of Power BI Desktop - 64-bit](#)

## June 2022 Update (2.106.582.0)

This month's updates were raining down features, sprinkling us with all sorts of capabilities and functionality that were sure to bring sunny reports sometime soon.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

#### IMPORTANT

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

## **IMPORTANT**

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

### **Reporting**

- New format pane (generally available) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Updates to error bars [\[video\]](#) [\[blog\]](#)
- Information protection updates [\[video\]](#) [\[blog\]](#)
- Table navigation improvements [\[video\]](#) [\[blog\]](#)
- Canvas Zoom in Teams and quick create [\[video\]](#) [\[blog\]](#)

### **Modeling**

- Composite models on SQL Server Analysis Services [\[video\]](#) [\[blog\]](#)

### **Data connectivity**

- Connect to datamarts (preview) [\[video\]](#) [\[blog\]](#)
- Many new data connectors [\[video\]](#) [\[blog\]](#)
- Many connector updates (update) [\[video\]](#) [\[blog\]](#)

#### **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

### **Visuals**

- New visuals in AppSource [\[video\]](#) [\[blog\]](#)
- Many new visuals and updates [\[video\]](#) [\[blog\]](#)

### **Others**

- Power BI Desktop infrastructure update (WebView2) [\[video\]](#) [\[blog\]](#)
- Improved support for single sign-on (SSO) for all users [\[video\]](#) [\[blog\]](#)

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

### **Power BI monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post.

#### **NOTE**

The video might use earlier versions of Power BI Desktop or the Power BI service.

You can also download previous versions of Power BI Desktop if your organization requires it. We always recommend that you use the most recent version of Power BI Desktop, rather than a previous version. All previous versions have the following limitations:

- Previous releases of Power BI Desktop are not being serviced - you should always use the most recent release for the latest features and updates.
- It may not be possible to open files created or saved in newer releases of Power BI Desktop with previous

versions of Power BI Desktop.

- If you receive a warning when loading a report saved in a newer release of Power BI Desktop, then save that report in the previous version, you lose any information related to new features.
- We only archive the English versions of Power BI Desktop.

Select the following links to download this earlier version:

- [June 2022 version of Power BI Desktop - 32-bit](#)
- [June 2022 version of Power BI Desktop - 64-bit](#)

## May 2022 Update (2.105.664.0)

This month had a spring in its step, with blossoming updates and sunshine-filled features that were sure to warm up your reports and models.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

### IMPORTANT

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

### IMPORTANT

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

### Reporting

- New Format pane updates (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Canvas zoom now generally available [\[video\]](#) [\[blog\]](#)
- Field parameters [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Managing composite models on Power BI datasets [\[video\]](#) [\[blog\]](#)

- Data point rectangle select now generally available [\[video\]](#) [\[blog\]](#)
- Error bars for column and line combination charts (preview) [\[video\]](#) [\[blog\]](#)
- ArcGIS for Power BI visual updates [\[video\]](#) [\[blog\]](#)

## Data connectivity

- Many new data connectors [\[video\]](#) [\[blog\]](#)
- Azure Databricks (update) [\[video\]](#) [\[blog\]](#)
- Denodo (update) [\[video\]](#) [\[blog\]](#)
- Google Sheets (update) [\[video\]](#) [\[blog\]](#)
- Autodesk Construction Cloud (update) [\[video\]](#) [\[blog\]](#)

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

## Visuals

- New visuals in AppSource [\[video\]](#) [\[blog\]](#)
- Many new visuals and updates [\[video\]](#) [\[blog\]](#)
- Charticulator now generally available [\[video\]](#) [\[blog\]](#)

## Others

- Power BI Desktop infrastructure update (WebView2) [\[video\]](#) [\[blog\]](#)

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

## Power BI monthly update video

The following video describes each of these updates. You can also watch this video from the blog post.

### NOTE

The video might use earlier versions of Power BI Desktop or the Power BI service.

## April 2022 Update (2.104.702.0)

The Power BI team showered us with features, updates, and a collection of growing capabilities this month that customers and users were sure to enjoy.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

#### **IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

#### **IMPORTANT**

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

[https://powerbi.microsoft.com/en-us/blog/19024/preview/#post-19024-\\_Toc100064173](https://powerbi.microsoft.com/en-us/blog/19024/preview/#post-19024-_Toc100064173)

#### **Reporting**

- New Format pane updates (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Tooltips now support drill actions for matrix, line and area charts (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Updates to required permissions when using composite models on Power BI datasets [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Error bars for clustered column and bar charts (preview) [\[video\]](#) [\[blog\]](#)
- Bookmark navigator now shows last selected bookmark per group [\[video\]](#) [\[blog\]](#) [\[article\]](#)

#### **Data preparation**

- Dynamic M query parameters now generally available [\[video\]](#) [\[blog\]](#) [\[article\]](#)

#### **Data connectivity**

- Autodesk Construction Cloud (new connector) [\[video\]](#) [\[blog\]](#)
- Digital Construction Works Insights (update) [\[video\]](#) [\[blog\]](#)
- Dremio, Dremio Cloud (update) [\[video\]](#) [\[blog\]](#)

#### **Visuals**

- New visuals in AppSource [\[video\]](#) [\[blog\]](#)
- Many new visuals and updates [\[video\]](#) [\[blog\]](#)

#### **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

#### **Others**

- Windows 11 support [\[video\]](#) [\[blog\]](#)

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

#### **Power BI monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post.

**NOTE**

The video might use earlier versions of Power BI Desktop or the Power BI service.

## March 2022 Update (2.103.661.0)

Lucky us, we had more compelling updates to Power BI in March than we could have wished for using a four-leaf clover.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

**IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

**IMPORTANT**

Power BI Desktop is no longer be supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

### Reporting

- New Format pane to be Generally Available in May (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Error bars (preview) [\[video\]](#) [\[blog\]](#)
- Dynamic format strings now supported for all chart elements [\[video\]](#) [\[blog\]](#)
- Updates to the Azure Maps visual (preview) [\[video\]](#) [\[blog\]](#) [\[Geocoding article\]](#) [\[Pie chart article\]](#)
- Sensitivity labels update [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Multi-row card selection [\[video\]](#) [\[blog\]](#)

### Data connectivity and preparation

- BitSight Security Ratings (new connector) [\[video\]](#) [\[blog\]](#)
- Bloomberg Enterprise Data and Analytics (update) [\[video\]](#) [\[blog\]](#)
- Anaplan (update) [\[video\]](#) [\[blog\]](#)
- FactSet Analytics (update) [\[video\]](#) [\[blog\]](#)
- AssembleViews (update) [\[video\]](#) [\[blog\]](#)

## Visuals

- New visuals in AppSource [\[video\]](#) [\[blog\]](#)
- Charticulator visual now certified [\[video\]](#) [\[blog\]](#)
- Many new visuals and updates [\[video\]](#) [\[blog\]](#)

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

## Developers

- A new improved method for deploying Power BI Embedded multi-tenancy solutions in scale [\[video\]](#) [\[blog\]](#)

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

## Power BI monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

### NOTE

This video might use earlier versions of Power BI Desktop or the Power BI service.

## February 2022 Update (2.102.683.0)

We loved the features we released in February. Some were flowery, some were chocolatey, others were downright sweet in their own unique way.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

## **IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

## **IMPORTANT**

Power BI Desktop is no longer be supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

### **Reporting**

- New mobile formatting options (preview) [\[video\]](#) [\[blog\]](#)
- Sensitivity labels downstream inheritance (generally available) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Default label policies in Power BI (generally available) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Mandatory label policy (generally available) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- New Format Pane (preview) - on by default [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Multi-row card selection [\[video\]](#) [\[blog\]](#)

### **Data preparation**

- Dynamic M Query Parameters now supports SQL Server and more data sources (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)

### **Data connectivity**

- Amazon OpenSearch Server (new connector) [\[video\]](#) [\[blog\]](#)
- OpenSearch Project (new connector) [\[video\]](#) [\[blog\]](#)
- Digital Construction Works Insights (new connector) [\[video\]](#) [\[blog\]](#)
- Azure Databricks (update) [\[video\]](#) [\[blog\]](#)
- BQE Core (update) [\[video\]](#) [\[blog\]](#)
- Microstrategy (update) [\[video\]](#) [\[blog\]](#)
- Starburst Enterprise (update) [\[video\]](#) [\[blog\]](#)

### **Visuals**

- New visuals in AppSource [\[video\]](#) [\[blog\]](#)
- Many new visuals and updates [\[video\]](#) [\[blog\]](#)

### **Other**

- WebView2 now required [\[video\]](#) [\[blog\]](#)
- Power BI Release Plan app [\[video\]](#) [\[blog\]](#)

## **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

### **Developers**

- New Power BI visuals category in AppSource [\[video\]](#) [\[blog\]](#)
- Expand entire level in Matrix [\[video\]](#) [\[blog\]](#)

- Dynamic format string support [\[video\]](#) [\[blog\]](#)

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

### Power BI monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

#### NOTE

This video might use earlier versions of Power BI Desktop or the Power BI service.

You can also download previous versions of Power BI Desktop if your organization requires it. We always recommend that you use the most recent version of Power BI Desktop, rather than a previous version. All previous versions have the following limitations:

- Previous releases of Power BI Desktop are not being serviced - you should always use the most recent release for the latest features and updates.
- It may not be possible to open files created or saved in newer releases of Power BI Desktop with previous versions of Power BI Desktop.
- If you receive a warning when loading a report saved in a newer release of Power BI Desktop, then save that report in the previous version, you lose any information related to new features.
- We only archive the English versions of Power BI Desktop.

## December 2021 Update (2.100.261.0)

This month's features were like a sleigh ride through your favorite snowy location, lighting up the season with all sorts of new things we had been wanting and asking for throughout the year.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

## **IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

## **IMPORTANT**

Power BI Desktop is no longer be supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

### **Reporting**

- Sparklines (preview) [\[video\]](#) [\[blog\]](#)
- New Format Pane updates (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)

### **Data connectivity**

- Azure Data Explorer (update) [\[video\]](#) [\[blog\]](#)
- TIBCO Data Virtualization now Generally Available [\[video\]](#) [\[blog\]](#)
- Many more updated connectors [\[video\]](#) [\[blog\]](#)

### **Visuals**

- New visuals in AppSource [\[video\]](#) [\[blog\]](#)
- Many new visuals and updates [\[video\]](#) [\[blog\]](#)

### **Other**

- Visualize your data quickly from Power Apps and Dynamics 365 apps (Preview) [\[video\]](#) [\[blog\]](#)

## **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

### **Power BI monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post:

## **NOTE**

This video might use earlier versions of Power BI Desktop or the Power BI service.

## **November 2021 Update (2.99.563.0)**

We were all thankful for the great things that Power BI served for our extended business intelligence family in November this year. Even better, there were enough features to feast on the next day, so invite your friends and even folks you don't know, sit down around this article, and share what you like best about what's on the menu.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for

mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

#### **IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

#### **IMPORTANT**

Power BI Desktop is no longer be supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

#### **Reporting**

- New Format pane (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Page and bookmark navigators [\[video\]](#) [\[blog\]](#)
- Sort legend [\[video\]](#) [\[blog\]](#)
- Bold, italic, underline for text formatting [\[video\]](#) [\[blog\]](#)
- Text box superscript, subscript, and bulleted lists [\[video\]](#) [\[blog\]](#)
- Pie and donut chart rotation [\[video\]](#) [\[blog\]](#)
- Scorecard visual [\[video\]](#) [\[blog\]](#)
- Update on tenant-level Bing Maps feature switch [\[video\]](#) [\[blog\]](#)

#### **Data connectivity**

- Azure Synapse Analytics (new connector) (preview) [\[video\]](#) [\[blog\]](#)
- Google Sheets (new connector) (preview) [\[video\]](#) [\[blog\]](#)
- Azure Cosmos DB V2 (new connector) (preview) [\[video\]](#) [\[blog\]](#)
- Delta Sharing (new connector) (preview) [\[video\]](#) [\[blog\]](#)
- Many more updated connectors [\[video\]](#) [\[blog\]](#)

#### **Visuals**

- New visuals in AppSource [\[video\]](#) [\[blog\]](#)

- Find report sample files easily in AppSource [[video](#)] [[blog](#)]
- Many new visuals [[video](#)] [[blog](#)]

## Other

- Automatic page refresh now supports DirectQuery for Power BI datasets and Azure Analysis Services [[blog](#)]

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

## Power BI monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

### NOTE

This video might use earlier versions of Power BI Desktop or the Power BI service.

## October 2021 Update (2.98.683.0)

There was a scary-good collection of features in this month's release, sure to make you want to dress up as your favorite character and go door-to-door telling your neighbors all about it - it's quite a bag of goodies.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

### IMPORTANT

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

## **IMPORTANT**

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

### **Reporting**

- Heat map layer - Azure Maps Visual (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- DirectQuery for Power BI datasets and Azure Analysis Services [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Tenant-level features switch for Bing Maps [\[video\]](#) [\[blog\]](#) [\[article\]](#)

### **Modeling**

- SWITCH performance optimization [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Bitwise functions in DAX [\[video\]](#) [\[blog\]](#)

### **Data connectivity**

- Azure Cosmos DB V2 (preview) [\[video\]](#) [\[blog\]](#)
- SIS-CC-SDMX (preview) [\[video\]](#) [\[blog\]](#)
- Usercube (preview) [\[video\]](#) [\[blog\]](#)
- Updates to many connectors [\[video\]](#) [\[blog\]](#)

### **Visuals**

- New visuals from various providers [\[video\]](#) [\[blog\]](#)

### **Other**

- ODBC support for paginated reports (generally available) [\[blog\]](#) [\[article\]](#)
- New instructor led training available for DAX in a day (Beta) [\[blog\]](#)

## **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

### **Power BI monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post:

## **NOTE**

This video might use earlier versions of Power BI Desktop or the Power BI service.

# **September 2021 Update (2.97.725.0)**

We were falling into this month's release, with crisp morning updates and new season of interesting and compelling features.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

#### **IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

#### **IMPORTANT**

Power BI Desktop is no longer be supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

#### **Reporting**

- New formatting options for buttons [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Toggle total columns in waterfall charts [\[video\]](#) [\[blog\]](#)
- Padding around visual title and border [\[video\]](#) [\[blog\]](#)
- Line chart series labels [\[video\]](#) [\[blog\]](#)
- Sensitivity label support for Power BI template files [\[video\]](#) [\[blog\]](#) [\[article\]](#)

#### **Analytics**

- Insights (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)

#### **Modeling**

- Shortcut expression for CALCULATE now supports aggregation functions [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- New parameter for XIRR function [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Making it easier to format based on a user's locale [\[video\]](#) [\[blog\]](#) [\[article\]](#)

#### **Data connectivity**

- The Power BI Connector in Power Automate [\[video\]](#) [\[blog\]](#)
- Updates to many connectors [\[video\]](#) [\[blog\]](#)

#### **Visuals**

- New visuals from various providers [\[video\]](#) [\[blog\]](#)

#### **Other**

- New version of Power BI Report Builder [[video](#)] [[blog](#)] [[article](#)]

**NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

**Power BI monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post:

**NOTE**

This video might use earlier versions of Power BI Desktop or the Power BI service.

## August 2021 Update (2.96.701.0)

August's release was like a warm summer day, with rays of new updates shining down on all of our Power BI enthusiasts and customers.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

**IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

**IMPORTANT**

Power BI Desktop is no longer be supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

## Reporting

- Customize shape formatting [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- X-axis constant line improvements [\[video\]](#) [\[blog\]](#)
- Default sensitivity label policy in Power BI Desktop (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)

## Analytics

- Sharing Q&A synonyms [\[video\]](#) [\[blog\]](#)

## Modeling

- New way of expressing Date and DateTime values [\[video\]](#) [\[blog\]](#)
- Evaluation configuration settings [\[video\]](#) [\[blog\]](#) [\[article\]](#)

## Data connectivity

- New connector - Automy Data Analytics (Beta) [\[video\]](#) [\[blog\]](#)
- Updates to many connectors [\[video\]](#) [\[blog\]](#)

## Visuals

- New store experience for Power BI visuals [\[video\]](#) [\[blog\]](#) [\[site\]](#)
- New visuals from various providers [\[video\]](#) [\[blog\]](#)

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

## Power BI monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

## July 2021 Update (2.95.804.0)

We celebrated this month's release with fireworks, parades and a whole host of independent data connectors and visualizations.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the

monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

#### **IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

#### **IMPORTANT**

Power BI Desktop is no longer be supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

#### **Reporting**

- Small multiples now generally available [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Conditional formatting for more properties [\[video\]](#) [\[blog\]](#)
- Power Automate visual now available (preview) [\[video\]](#) [\[blog\]](#)
- Sensitivity labels in Power BI Desktop [\[video\]](#) [\[blog\]](#)
- Republish PBIX with option to not override label in destination [\[video\]](#) [\[blog\]](#)
- Inherit sensitivity label set to Excel files when importing data into Power BI [\[video\]](#) [\[blog\]](#)

#### **Analytics**

- Sharing Q&A synonyms [\[video\]](#) [\[blog\]](#)

#### **Modeling**

- New Model View now generally available [\[video\]](#) [\[blog\]](#)
- DirectQuery for Azure Analysis Services and Power BI datasets (preview) [\[video\]](#) [\[blog\]](#)

#### **Data connectivity**

- New connectors - Amazon Athena [\[video\]](#) [\[blog\]](#)
- Updates to many connectors [\[video\]](#) [\[blog\]](#)

#### **Visuals**

- New visuals from various providers [\[video\]](#) [\[blog\]](#)

#### **Template apps**

- Analyze email marketing performance using Mailchimp and ActiveCampaign [\[blog\]](#)

#### **Other**

- Power BI Desktop installer changes [\[article\]](#) [\[blog\]](#)

#### **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

#### **Power BI monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post:

## June 2021 Update (2.94.781.0)

With June's release, warm and sunny updates were in the forecast for your reports.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

### IMPORTANT

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

### IMPORTANT

Power BI Desktop is no longer be supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates were new to Power BI Desktop this month:

### Reporting

- Paginated reports visual (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Area chart transparency sliders [\[video\]](#) [\[blog\]](#)
- Inner padding for continuous axes [\[video\]](#) [\[blog\]](#)
- Small multiples: responsiveness and conditional formatting (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)

### Analytics

- Q&A improvements for inferred results [\[video\]](#) [\[blog\]](#)

### Modeling

- Format strings now persisted when using DirectQuery for Power BI datasets and Azure Analysis Services (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)

## Data preparation

- DirectQuery support for dataflows now generally available [\[video\]](#) [\[Article\]](#) [\[blog\]](#)
- Select all operation is now supported for Dynamic M Query Parameters (preview) [\[video\]](#) [\[Article\]](#) [\[blog\]](#)

## Data connectivity

- New connectors - Assemble Views, BQE Core, SumTotal [\[video\]](#) [\[blog\]](#)
- Updates to many connectors [\[video\]](#) [\[blog\]](#)
- Connector deprecation - Azure Consumption Insights [\[video\]](#) [\[blog\]](#)

## Visuals

- New visuals from various providers [\[video\]](#) [\[blog\]](#)

## Template apps

- Template app one-click update and republish [\[video\]](#) [\[blog\]](#)
- Salesforce Analytics for Sales Managers [\[video\]](#) [\[blog\]](#)

## Other

- Power BI Desktop installer changes [\[article\]](#) [\[blog\]](#)
- June update of Power BI Report Builder [\[article\]](#) [\[blog\]](#)

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

## Power BI monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

## May 2021 Update (2.93.384.0)

May brought an entire bouquet of blooming updates for Power BI.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

## **IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

## **IMPORTANT**

Power BI Desktop is no longer be supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

### **Reporting**

- Modern visual tooltips (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Small multiples: now on by default, and updated roadmap (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#) [\[article 2\]](#)
- New field list now generally available [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Support for removing the sensitivity label in Power BI Desktop [\[video\]](#) [\[blog\]](#) [\[article\]](#)

### **Analytics**

- Smart Narratives and anomaly detection (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Q&A now supports DirectQuery for Power BI datasets and Azure Analysis Services [\[video\]](#) [\[blog\]](#)

### **Modeling**

- DirectQuery for Power BI datasets and Azure Analysis Services (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Model view updates [\[video\]](#) [\[blog\]](#) [\[article\]](#)

### **Data connectivity**

- New connector - EQuIS [\[video\]](#) [\[blog\]](#)
- Updates to many connectors [\[video\]](#) [\[blog\]](#)
- Connector deprecation - Microsoft Graph Security [\[video\]](#) [\[blog\]](#)

### **Visuals**

- New visuals from various providers [\[video\]](#) [\[blog\]](#)

### **Template apps**

- Dataflows Snapshot Analysis [\[video\]](#) [\[blog\]](#)

### **Developers**

- Dialog boxes support for Power BI custom visuals [\[video\]](#) [\[blog\]](#)
- Displaying a warning icon for a custom visual [\[video\]](#) [\[blog\]](#)

### **Other**

- Share and collaborate in Excel for the web connected to Power BI [\[video\]](#) [\[article\]](#) [\[blog\]](#)

## **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

## Power BI monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

You can also download previous versions of Power BI Desktop if your organization requires it. We always recommend that you use the most recent version of Power BI Desktop, rather than a previous version. All previous versions have the following limitations:

- Previous releases of Power BI Desktop are not being serviced - you should always use the most recent release for the latest features and updates.
- It may not be possible to open files created or saved in newer releases of Power BI Desktop with previous versions of Power BI Desktop.
- If you receive a warning when loading a report saved in a newer release of Power BI Desktop, then save that report in the previous version, you lose any information related to new features.
- We only archive the English versions of Power BI Desktop.

## April 2021 Update (2.92.706.0)

Spring was in the air, and so was a great collection of updates for Power BI.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

### IMPORTANT

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

### IMPORTANT

Power BI Desktop is no longer be supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

## Reporting

- Power Automate for Power BI (preview) [\[video\]](#) [\[blog\]](#)
- Small multiples: padding controls and combo chart support (preview) [\[video\]](#) [\[blog\]](#)
- New and improved shapes [\[video\]](#) [\[blog\]](#)
- Invert axis and continuous axis sorting [\[video\]](#) [\[blog\]](#)

## Modeling

- DirectQuery for Power BI datasets and Azure Analysis Services (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- CROSSFILTER supports many-to-many relationships [\[video\]](#) [\[blog\]](#)
- Performance improvements to IF and SWITCH functions [\[video\]](#) [\[blog\]](#)

## Data connectivity

- New connector - Bloomberg Data and Analytics [\[video\]](#) [\[blog\]](#)
- New connector - SoftOne BI [\[video\]](#) [\[blog\]](#)
- Text/CSV by example now generally available [\[video\]](#) [\[blog\]](#)
- Automatic table detection from Excel files now generally available [\[video\]](#) [\[blog\]](#)
- Automatic table detection from JSON files now generally available [\[video\]](#) [\[blog\]](#)

## Visuals

- New visuals from various providers [\[video\]](#) [\[blog\]](#)

## Developers

- API v3.6.0 now available [\[video\]](#) [\[blog\]](#)

## Other

- Simplifying collection of diagnostic information [\[video\]](#) [\[article\]](#) [\[blog\]](#)

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

## Power BI monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

You can also download previous versions of Power BI Desktop if your organization requires it. We always recommend that you use the most recent version of Power BI Desktop, rather than a previous version. All previous versions have the following limitations:

- Previous releases of Power BI Desktop are not being serviced - you should always use the most recent release for the latest features and updates.
- It may not be possible to open files created or saved in newer releases of Power BI Desktop with previous versions of Power BI Desktop.
- If you receive a warning when loading a report saved in a newer release of Power BI Desktop, then save that report in the previous version, you lose any information related to new features.
- We only archive the English versions of Power BI Desktop.

## March 2021 Update (2.91.701.0)

We felt lucky like a four-leaf clover to deliver these March Power BI updates to our community.

This article describes updates to **Power BI Desktop** and the **Power BI service**. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

The links beside each feature in the list are follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

#### IMPORTANT

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

#### IMPORTANT

Power BI Desktop is no longer be supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

#### Reporting

- DirectQuery for Power BI datasets and Azure Analysis Services (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Advanced data selection in Azure Maps visual [\[video\]](#) [\[blog\]](#)
- Color picker updates [\[blog\]](#)
- Updates to the new Field List (preview) [\[blog\]](#)
- Word wrap in Small Multiples titles (preview) [\[video\]](#) [\[blog\]](#)
- Updates to background settings on Small Multiples (preview) [\[blog\]](#)

#### Analytics

- X-axis constant line for line charts [\[video\]](#) [\[blog\]](#)

#### Modeling

- Model view user interface (preview) [\[video\]](#) [\[blog\]](#)
- IF.EAGER [\[video\]](#) [\[blog\]](#)
- CALCULATE filters now easier to use [\[video\]](#) [\[blog\]](#)

#### Data connectivity

- Kerberos-based SSO for Denodo [\[video\]](#) [\[blog\]](#)
- Certified connectors [\[video\]](#) [\[blog\]](#)

## Visuals

- New visuals from various providers [\[video\]](#) [\[blog\]](#)

## Template Apps

- Download PBIX files for installed template apps [\[video\]](#) [\[blog\]](#)
- Analyze popular stocks with Power BI [\[video\]](#) [\[blog\]](#)
- Additional template apps [\[video\]](#) [\[blog\]](#)

## Other

- Windows 7 deprecation [\[video\]](#) [\[blog\]](#)
- Certificate revocation check controls now available in Desktop interface [\[video\]](#) [\[blog\]](#)
- External Tools integration with Power BI Desktop generally available [\[blog\]](#) [\[article\]](#)
- Instructor-led training for Power BI [\[blog\]](#)
- Power BI Desktop change log [\[blog\]](#) [\[article\]](#)

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

For detailed information about each of new feature, see [Power BI feature summary blog post](#).

## Power BI monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

## February 2021 Update (2.90.702.0)

Our February Power BI updates were better than a heart-shaped box of chocolates.

If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

### IMPORTANT

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

The links beside each feature in the Power BI Desktop update list are interpreted as follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

## **IMPORTANT**

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop will be supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

### **Reporting**

- DirectQuery for Power BI datasets and Azure Analysis Services (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Search Bar [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Model View Updates (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- New Field List (preview) [\[video\]](#) [\[blog\]](#)
- Small Multiples (preview) - gridlines and background colors [\[video\]](#) [\[blog\]](#)
- Color picker [\[video\]](#) [\[blog\]](#)
- Smart guides for aligning objects - mobile layout view [\[video\]](#) [\[blog\]](#)
- New filter operations - is empty, is not empty [\[video\]](#) [\[blog\]](#)
- Certificate revocation check for web connections - granular control [\[video\]](#) [\[blog\]](#)

### **Analytics**

- Anomaly detection now in the ribbon [\[video\]](#) [\[blog\]](#)

### **Modeling**

- Enhanced dataset metadata format [\[video\]](#) [\[blog\]](#)

### **Data connectivity**

- New Teams Analytics connector [\[video\]](#) [\[blog\]](#)
- Snowflake - support for custom roles [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Parquet Files - connector available in Power BI Desktop [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Hive LLAP - support for Windows authentication [\[video\]](#) [\[blog\]](#)
- Salesforce - API update [\[video\]](#) [\[blog\]](#)
- SAP HANA and BW - new documentation [\[video\]](#) [\[blog\]](#)

### **Visuals**

- New visuals from various providers [\[video\]](#) [\[blog\]](#)

### **Other**

- New icon update [\[video\]](#) [\[blog\]](#)

For detailed information about each of these new features, see [Power BI Desktop feature summary blog post](#).

## **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

### **Power BI Desktop monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post:

## **December 2020 Update (2.88.321.0)**

Our December Power BI updates dazzled us all like a snowy lane filled with lights and sleigh rides.

- [Power BI Desktop](#)
- [Power BI service](#)

If you're running Windows 10, you can get the most recent version of Power BI Desktop from the [Windows Store](#). You can also get the latest version from the [Download Center](#), as a single executable containing all supported languages that you install on your computer.

Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

#### **IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version.

The following updates are new to Power BI Desktop this month:

#### **Reporting**

- DirectQuery for Power BI datasets and Azure Analysis Services (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Small multiples (preview) [\[video\]](#) [\[blog\]](#)
- Data protection sensitivity labels in Power BI Desktop (preview) [\[video\]](#) [\[blog\]](#)
- Increased rectangle select data point limit [\[video\]](#) [\[blog\]](#)
- Selection pane now available in mobile layout view [\[video\]](#) [\[blog\]](#)
- Automatic page refresh for Analysis Services sources [\[video\]](#) [\[blog\]](#)

#### **Data preparation**

- Changes to Power Query and dataflows [\[video\]](#) [\[blog\]](#)

#### **Data connectivity**

- Microsoft Dataverse connector [\[video\]](#) [\[blog\]](#)
- Azure Time Series Insights update [\[video\]](#) [\[blog\]](#)
- SurveyMonkey update [\[video\]](#) [\[blog\]](#)
- Cognite update [\[video\]](#) [\[blog\]](#)

#### **Visuals**

- New visuals from various providers [\[video\]](#) [\[blog\]](#)

For detailed information about each of these new features, see [Power BI Desktop feature summary blog post](#).

#### **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

#### **Power BI Desktop monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post:

## **November 2020 Update (2.87.261.0)**

Our November Power BI updates included an entire family gathering of new and improved features; they were a

feast of goodness.

The monthly blog and video updates for Power BI Desktop now also includes what's new updates for Power BI mobile and the Power BI service. In this section choose the tab for Power BI Desktop or the Power BI service. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

#### **IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

The links beside each feature in the Power BI Desktop update list are interpreted as follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

#### **IMPORTANT**

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop will be supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

#### **Reporting**

- New Field List (preview) [\[video\]](#) [\[blog\]](#)
- New Model View (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Apply all filters now generally available [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Visual zoom slider [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Data point rectangle select extended to Map visual [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Certificate revocation check for web connections [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Paginated reports updates [\[video\]](#) [\[blog\]](#) [\[article\]](#)

#### **Analytics**

- Anomaly detection (preview) [\[video\]](#) [\[blog\]](#)
- Q&A now supports partial matching data values [\[video\]](#) [\[blog\]](#) [\[article\]](#)

#### **Data connectivity**

- Hive LLAP connector now generally available [\[video\]](#) [\[blog\]](#)
- New data connectors - Actian, Anaplan, Starburst Presto [\[video\]](#) [\[blog\]](#)

## Visuals

- New visuals from various providers [[video](#)] [[blog](#)]

For detailed information about each of these new features, see [Power BI Desktop feature summary blog post](#).

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

## Power BI Desktop monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

## October 2020 Update (2.86.321.0)

Our October Power BI updates are a bucket full of spooky-good treats that you can sort and enjoy for weeks to come.

The monthly blog and video updates for Power BI Desktop now also includes what's new updates for Power BI mobile and the Power BI service. This article discusses the updates for Power BI Desktop and the Power BI service. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

### IMPORTANT

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

The links beside each feature in the Power BI Desktop update list are interpreted as follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

### IMPORTANT

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop will be supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

## Reporting

- Canvas watermarks [[video](#)] [[blog](#)]
- Personalize visuals is now generally available [[video](#)] [[blog](#)] [[article](#)]

- Data point rectangle select for Treemap (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)

## Analytics

- Export data from Q&A visual [\[video\]](#) [\[blog\]](#)

## Modeling

- Performance improvements to IF and SWITCH functions [\[blog\]](#)

## Data preparation

- Dynamic M Query Parameters (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Automatic Table Detection from Excel files [\[video\]](#) [\[blog\]](#)
- Automatic Table Detection from JSON files [\[video\]](#) [\[blog\]](#)

## Data connectivity

- Broader geographical support for Power Platform Dataflows connector [\[video\]](#) [\[blog\]](#)
- MariaDB now supports DirectQuery [\[video\]](#) [\[blog\]](#)
- Updated SharePoint Online List connector [\[video\]](#) [\[blog\]](#)
- New data connectors - Spigit and eWay-CRM [\[video\]](#) [\[blog\]](#)

## Visuals

- Extended administrator capability features now generally available [\[video\]](#) [\[blog\]](#)
- New visuals from various providers [\[video\]](#) [\[blog\]](#)

## Template Apps

- Simplified installation for template apps [\[video\]](#) [\[blog\]](#)
- Find template apps from Power BI Desktop [\[video\]](#) [\[blog\]](#)

## Other

- Export data source to PBIDS in Power BI Desktop [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Icon update for Power BI [\[video\]](#) [\[blog\]](#)
- Power BI Desktop splash screen dismiss [\[video\]](#) [\[blog\]](#)

For detailed information about each of these features, see [Power BI Desktop feature summary blog post](#).

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

## Power BI Desktop monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

# September 2020 Update (2.85.284.0)

Our September Power BI Desktop updates are cool and crisp, like the coming of fall and the turning of leaves.

Also new this month, the monthly blog and video updates for Power BI Desktop now also includes what's new updates for Power BI mobile and the Power BI service. This article discusses the updates for Power BI Desktop and the Power BI service. To learn about updates for mobile, check out [What's new in the mobile apps for Power BI](#).

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the

monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

#### **IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

The links beside each feature in the Power BI Desktop update list are interpreted as follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI monthly update video](#).

#### **IMPORTANT**

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop will be supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

#### **Analytics**

- Smart narratives (preview) [\[video\]](#) [\[blog\]](#)
- Q&A now supports arithmetic operations [\[video\]](#) [\[blog\]](#)

#### **Reporting**

- Data point rectangle select for additional charts [\[video\]](#) [\[blog\]](#)
- Added general visual option to maintain layer order [\[video\]](#) [\[blog\]](#)
- Search for a workspace during publish [\[video\]](#) [\[blog\]](#)
- Total labels for stacked visuals [\[video\]](#) [\[blog\]](#)
- Mobile authoring enhancements [\[video\]](#) [\[blog\]](#)

#### **Modeling**

- Enhanced Dataset Metadata is now generally available [\[video\]](#) [\[blog\]](#)
- Performance improvements to aggregation expressions involving columns of currency data type [\[video\]](#) [\[blog\]](#)

#### **Data connectivity**

- Azure Databricks [\[video\]](#) [\[blog\]](#)
- MariaDB [\[video\]](#) [\[blog\]](#)
- Hexagon PPM Smart API [\[video\]](#) [\[blog\]](#)
- Other data connectivity updates [\[video\]](#) [\[blog\]](#)

#### **Visuals**

- New visuals from various providers [\[video\]](#) [\[blog\]](#)

#### **Template apps**

- Multichannel attribution dashboard [\[video\]](#) [\[blog\]](#)

- Workspace analytics dashboard [[video](#)] [[blog](#)]

For detailed information about each of these new features, see [Power BI Desktop feature summary blog post](#).

**NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

### **Power BI Desktop monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post:

## August 2020 Update (2.84.461.0)

Our August Power BI Desktop updates were full of compelling new features and capabilities.

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

**IMPORTANT**

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

The links beside each feature in the Power BI Desktop update list are interpreted as follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI Desktop monthly update video](#).

**IMPORTANT**

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop will be supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

### **Reporting**

- Perspectives support for Personalize visuals (preview) [[video](#)] [[blog](#)]
- Rectangular lasso select for data points (preview) [[video](#)] [[blog](#)]
- Added dynamic formatting support to more visuals [[video](#)] [[blog](#)]

### **Analytics**

- DirectQuery support for Q&A [[video](#)] [[blog](#)]

### **Visuals**

- Multiple new visuals from various companies [\[video\]](#) [\[blog\]](#)
- ArcGIS Maps updates [\[video\]](#) [\[blog\]](#)
- Extending admin capabilities for AppSource visuals [\[video\]](#) [\[blog\]](#)

## Template apps

- Agile CRM Analytics for Dynamics 365 [\[video\]](#) [\[blog\]](#)

## Data preparation

- Text/CSF by Example (preview) [\[video\]](#) [\[blog\]](#)

## Data connectivity

- Cherwell connector [\[video\]](#) [\[blog\]](#)
- Automation Anywhere connector [\[video\]](#) [\[blog\]](#)
- Acterys connector [\[video\]](#) [\[blog\]](#)

For detailed information about each of these new features, see [Power BI Desktop feature summary blog post](#).

Check out [what's new in the mobile apps for Power BI](#).

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

## Power BI Desktop monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

## July 2020 Update (2.83.5894.661)

Our July Power BI Desktop updates were a celebration of new features and capabilities worthy of fireworks, sunny picnics and community barbecues.

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

### IMPORTANT

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

The links beside each feature in the Power BI Desktop update list are interpreted as follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI Desktop monthly update video](#).

The following updates are new to Power BI Desktop this month:

## Reporting

- Gradient layout [\[video\]](#) [\[blog\]](#)
- Ability to further customize slicer header text [\[video\]](#) [\[blog\]](#)
- Relative time filter is now generally available [\[video\]](#) [\[blog\]](#)

## Analytics

- Enhancements to Q&A [\[video\]](#) [\[blog\]](#)

## Visuals

- Azure Maps visual (preview) [\[video\]](#) [\[blog\]](#)
- Updates to Multi-Axis chart by XViz [\[video\]](#) [\[blog\]](#)

## Modeling

- Support for Excel financial functions [\[video\]](#) [\[blog\]](#)
- Model view enabled for live connect is now generally available [\[video\]](#) [\[blog\]](#)

## Data preparation

- Global option to disable automatic type detection [\[video\]](#) [\[blog\]](#)

## Template apps

- YouTube Analytics by MAQ Software [\[video\]](#) [\[blog\]](#)

## Other features

- Launch external tools from Power BI Desktop (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)

For detailed information about each of these new features, see [Power BI Desktop feature summary blog post](#).

Check out [what's new in the mobile apps for Power BI](#).

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

## Power BI Desktop monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

## June 2020 Update (2.82.5858.301)

Our June Power BI Desktop felt like a fresh new beginning filled with new capabilities, generally available features, and many opportunities to get out into your world of data and interact.

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

### IMPORTANT

Power BI Desktop is released only as a single .exe file, which contains all supported languages. The .msi version is no longer being released.

The links beside each feature in the Power BI Desktop update list are interpreted as follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI Desktop monthly update video](#).

The following updates are new to Power BI Desktop this month:

## Reporting

- Enhancements to mobile layout authoring [\[video\]](#) [\[blog\]](#)
- Automatic page refresh now generally available [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Hierarchical slicer now generally available [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Modern ribbon now generally available [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- RLS now supported for Featured Tables in Excel's Data Types gallery [\[video\]](#) [\[article\]](#) [\[blog\]](#)

## Analytics

- AI insights now generally available [\[video\]](#) [\[article\]](#) [\[blog\]](#)

## Visuals

- Line chart dot formatting options [\[video\]](#) [\[blog\]](#)
- Many new visuals from multiple vendors [\[video\]](#) [\[blog\]](#)

## Template apps

- Agile HR Analytics [\[video\]](#) [\[blog\]](#)
- Uber User Data Report [\[video\]](#) [\[blog\]](#)

## Modeling

- Model view enabled for live connect (preview) [\[video\]](#) [\[blog\]](#)
- Updates to Model view [\[video\]](#) [\[blog\]](#)

## Data connectivity

- Palantir Foundry connector [\[video\]](#) [\[article\]](#) [\[blog\]](#)

## Other features

- New Power BI trainings [\[video\]](#) [\[blog\]](#)

For detailed information about each of these new features, see [Power BI Desktop feature summary blog post](#).

Check out [what's new in the mobile apps for Power BI](#).

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

## Power BI Desktop monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

# May 2020 Update (2.81.5831.621)

We hope our May Power BI Desktop brought you new insights, new capabilities, and a healthy dose of positive

outlook for our global community.

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

#### **IMPORTANT**

Power BI Desktop is released only as a single .exe file, which contains all supported languages. The .msi version is no longer being released.

The links beside each feature in the Power BI Desktop update list are interpreted as follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI Desktop monthly update video](#).

The following updates are new to Power BI Desktop this month:

#### **Reporting**

- Curate featured tables for Excel (preview) [\[video\]](#) [\[blog\]](#)
- Apply all filters (preview) [\[video\]](#) [\[blog\]](#)
- Enhancements to change detection (preview) [\[video\]](#) [\[blog\]](#)
- Drillthrough button action is now generally available [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Enhancements to page navigation action [\[video\]](#) [\[blog\]](#)
- Buttons now support fill images [\[video\]](#) [\[blog\]](#)
- Drop shadow support for visuals [\[video\]](#) [\[blog\]](#)
- Filter pane migration [\[video\]](#) [\[blog\]](#)

#### **Analytics**

- Decomposition tree now generally available [\[video\]](#) [\[blog\]](#)

#### **Visuals**

- New Power BI visuals [\[video\]](#) [\[blog\]](#)
- Power Apps visual now compatible with all supported languages [\[video\]](#) [\[blog\]](#)

#### **Modeling**

- List separator and decimal symbol now default to standard DAX separators [\[video\]](#) [\[blog\]](#)

#### **Data preparation**

- DirectQuery on Dataflows [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Web by example now automatically suggests tables by default [\[video\]](#) [\[blog\]](#)
- Enhancements to Query Diagnostics: Privacy Level partitions [\[video\]](#) [\[blog\]](#)

#### **Data connectivity**

- Many new data connectors [\[video\]](#) [\[article\]](#) [\[blog\]](#)

#### **Other features**

- Dataset impact analysis [\[video\]](#) [\[blog\]](#)

For detailed information about each of these new features, see [Power BI Desktop feature summary blog post](#).

Check out [what's new in the mobile apps for Power BI](#).

**NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

## Power BI Desktop monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

## April 2020 Update (2.80.5803.282)

We were grateful to be able to share our April Power BI update with you, our global community.

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

**IMPORTANT**

Power BI Desktop is released only as a single .exe file, which contains all supported languages. The .msi version is no longer being released.

The links beside each feature in the Power BI Desktop update list are interpreted as follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI Desktop monthly update video](#).

The following updates are new to Power BI Desktop this month:

### Reporting

- Personalize visuals (preview) [\[video\]](#) [\[blog\]](#)
- Change detection for page refresh (preview) [\[video\]](#) [\[blog\]](#)
- Relative time filter (preview) [\[video\]](#) [\[blog\]](#)
- Rectangular lasso select across visuals [\[video\]](#) [\[blog\]](#)
- Conditional formatting for totals and subtotals in table and matrix [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Customize theme dialog is now generally available [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Improved discoverability for conditional formatting [\[video\]](#) [\[blog\]](#)

### Analytics

- DirectQuery support for AI visuals [\[video\]](#) [\[blog\]](#)
- Decomposition tree now supports tooltips [\[video\]](#) [\[blog\]](#)

- Q&A updates [[video](#)] [[blog](#)]

## Visuals

- New visualization icons [[video](#)] [[blog](#)]
- New Power BI visuals [[video](#)] [[blog](#)]

## Template apps

- Power Platform Center of Excellence StartKit [[video](#)] [[blog](#)]
- Azure Cognitive Search: analyze logs and metrics [[video](#)] [[blog](#)]
- COVID-19 apps [[video](#)] [[blog](#)]

## Data preparation

- Enhancements to Query diagnostics [[video](#)] [[blog](#)]

## Data connectivity

- CDM Folder view for Azure Data Lake Storage Gen2 [[video](#)] [[blog](#)]

## Other features

- New instructor-led training [[video](#)] [[blog](#)]

For detailed information about each of these new features, see [Power BI Desktop feature summary blog post](#).

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

## Power BI Desktop monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

## March 2020 Update (2.79.5768.562)

We felt lucky as a four-leaf clover to share our March Power BI update with you.

- [Power BI Desktop](#)
- [Power BI service](#)

Get the latest version of Power BI Desktop from the [Download Center](#). If you're running Windows 10, you can also get Power BI Desktop from the [Microsoft Store](#). Regardless of how you install Power BI Desktop, the monthly versions are the same, although the version numbering may differ. For more information about downloading and installing Power BI Desktop, see [Get Power BI Desktop](#).

### IMPORTANT

Power BI Desktop is released only as a single .exe file, which contains all supported languages. The .msi version is no longer being released.

The links beside each feature in the Power BI Desktop update list are interpreted as follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

You can also watch the entire [Power BI Desktop monthly update video](#).

The following updates are new to Power BI Desktop this month:

## Reporting

- New action types for buttons [\[video\]](#) [\[blog\]](#)
- Multi-column sort for tables [\[video\]](#) [\[blog\]](#)
- Dual axis for line chart [\[video\]](#) [\[blog\]](#)
- Filter pane search [\[video\]](#) [\[blog\]](#)
- Updates to decomposition tree visual [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- New ribbon is now on by default [\[video\]](#) [\[article\]](#) [\[blog\]](#)

## Modeling

- New DAX function: COALESCE [\[video\]](#) [\[article\]](#) [\[blog\]](#)

## Visuals

- Updates to ArcGIS Maps [\[video\]](#) [\[blog\]](#)
- New Power BI visuals [\[video\]](#) [\[blog\]](#)

## Template apps

- Azure DevOps dashboard by Data Maru [\[video\]](#) [\[blog\]](#)
- TeamsPower by Encamina [\[video\]](#) [\[blog\]](#)

## Data preparation

- Query diagnostics now generally available [\[video\]](#) [\[blog\]](#)

## Data connectivity

- Hive LLAP connector (preview) [\[video\]](#) [\[blog\]](#)
- Cognite connector (preview) [\[video\]](#) [\[blog\]](#)

## Other features

- Enhanced dataset metadata (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Using default system credentials for web proxy [\[video\]](#) [\[blog\]](#)
- New instructor-led administrator in a day training [\[video\]](#) [\[blog\]](#)

For detailed information about each of these new features, see [Power BI Desktop feature summary blog post](#).

Check out [what's new in the mobile apps for Power BI](#).

### NOTE

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

## Power BI Desktop monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

# February 2020 Update (2.78.5740.642)

We loved our February updates, and felt our new features were better than a heart-shaped box of chocolates.

- [Power BI Desktop](#)
- [Power BI service](#)

## **IMPORTANT**

Power BI Desktop is released only as a single .exe file, which contains all supported languages. The .msi version is no longer being released.

The links beside each feature in the Power BI Desktop update list are interpreted as follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

The following updates were new to Power BI Desktop this month:

### **Data management**

- Incremental refresh is now generally available [\[video\]](#) [\[article\]](#) [\[blog\]](#)

### **Reporting**

- Hierarchical slicer (preview) [\[video\]](#) [\[blog\]](#)
- Updates to the new ribbon (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)

### **Modeling**

- New DAX functions: FirstNonBlankValue, LastNonBlankValue [\[video\]](#) [\[article\]](#) [\[blog\]](#)

### **Visuals**

- New custom visuals [\[video\]](#) [\[blog\]](#)

### **Template apps**

- Microsoft 365 usage analytics [\[video\]](#) [\[blog\]](#)
- NFL analytics by P3 [\[video\]](#) [\[blog\]](#)
- Acterys for Quickbooks, Zero and WorkflowMax [\[video\]](#) [\[blog\]](#)

### **Data preparation**

- Query diagnostics - support for users who aren't administrators [\[video\]](#) [\[blog\]](#)

### **Data connectivity**

- MicroStrategy connector (generally availability) [\[video\]](#) [\[blog\]](#)
- FHIR connector (generally availability) [\[video\]](#) [\[blog\]](#)
- Additional connectors: Factset, TIBCO, Jamf Pro, Asana [\[video\]](#) [\[blog\]](#)

For detailed information about each of these new features, see [Power BI Desktop feature summary blog post](#).

Check out [what's new in the mobile apps for Power BI](#).

## **NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

### **Power BI Desktop monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post:

# December 2019 Update (2.76.5678.661)

Our December updates were as fun as a bobsled ride down a snow-covered hill.

- [Power BI Desktop](#)
- [Power BI service](#)

## IMPORTANT

Power BI Desktop is released only as a single .exe file, which contains all supported languages. The .msi version is no longer being released.

The links beside each feature in the Power BI Desktop update list are interpreted as follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

The following updates were new to Power BI Desktop this month:

## Reporting

- Theming updates (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Export the current theme (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Setting table column or matrix value as a custom URL [\[video\]](#) [\[blog\]](#)
- KPI visual formatting settings [\[video\]](#) [\[blog\]](#)
- New decomposition tree formatting [\[video\]](#) [\[blog\]](#)
- Filter pane toggle button in the new ribbon [\[video\]](#) [\[blog\]](#)
- Automatic page refresh query details [\[video\]](#) [\[blog\]](#)

## Analytics

- Load more for Analyze insights [\[video\]](#) [\[blog\]](#)
- New DAX function: Quarter [\[video\]](#) [\[blog\]](#)

## Visuals

- Personalizing the Visuals pane (generally availability) [\[video\]](#) [\[blog\]](#)
- New Power BI visuals [\[video\]](#) [\[blog\]](#)

## Data connectivity

- Azure Data Lake Storage Gen2 connector (generally availability) [\[video\]](#) [\[blog\]](#)
- Power Platform Dataflows connector (generally availability) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- PostgreSQL connector now includes the Npgsql provider [\[video\]](#) [\[blog\]](#)
- AtScale connector (general availability) [\[video\]](#) [\[blog\]](#)
- Azure Time Series Insights connector [\[video\]](#) [\[blog\]](#)
- Data Virtuality connector [\[video\]](#) [\[blog\]](#)
- Zucchetti HR Infinity connector [\[video\]](#) [\[blog\]](#)

## Data preparation

- Updates to AI Insights functions (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)

## Template apps

- Omnichannel insights for Dynamics 365 [\[video\]](#) [\[blog\]](#)

- Customer service analytics for Dynamics 365 [[video](#)] [[blog](#)]
- Microsoft Forms Pro for Customer Services [[video](#)] [[blog](#)]

For detailed information about each of these new features, see [Power BI Desktop December 2019 feature summary](#).

Check out [what's new in the mobile apps for Power BI](#).

**NOTE**

See the [data sources available to Power BI Desktop](#). Our list is always growing, so check back often.

### **Power BI Desktop monthly update video**

The following video describes each of these updates. You can also watch this video from the blog post:

## November 2019 Update (2.75.5649.341)

Our November updates were as welcome as a happy family gathering.

- [Power BI Desktop](#)
- [Power BI service](#)

**IMPORTANT**

Power BI Desktop is released only as a single .exe file, which contains all supported languages. The .msi version is no longer being released.

The links beside each feature in the Power BI Desktop update list are interpreted as follows:

- [blog]: Most features are explained in a section in the monthly update blog post.
- [video]: Some features have a video excerpt that discusses the feature, which plays in a new browser tab.
- [article]: Some features have an article that provides more detail.
- The remaining features are self-explanatory and don't need an article or video.

The following updates were new to Power BI Desktop this month:

### **User experience**

- Updated ribbon (preview) [[video](#)] [[article](#)] [[blog](#)]

### **Reporting**

- Decomposition tree visual (preview) [[video](#)] [[blog](#)]

### **Analytics**

- Conditionally format button formatting [[video](#)] [[blog](#)]

### **Visuals**

- ArcGIS Maps for Power BI update [[video](#)] [[blog](#)]
- New xViz visuals [[video](#)] [[blog](#)]
- ZoomCharts Drill-Down Waterfall visual [[video](#)] [[blog](#)]
- Financial Reporting Matrix by Profitbase [[video](#)] [[blog](#)]
- Distribution [[video](#)] [[blog](#)]

- Tree [\[video\]](#) [\[blog\]](#)

## Data connectivity

- LinkedIn Sales Navigator connector [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Edit SAP variables experience (general availability) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Product Insights connector [\[video\]](#) [\[blog\]](#)

## Data transformation

- AI functions in Power Query (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Web by Example connector - support for extracting links [\[video\]](#) [\[blog\]](#)

## Template apps

- LinkedIn Sales Navigator for Sales Operations [\[video\]](#) [\[article\]](#) [\[blog\]](#)

For detailed information about each of these new features, see [Power BI Desktop November 2019 feature summary](#).

Check out [what's new in the mobile apps for Power BI](#).

## Power BI Desktop monthly update video

The following video describes each of these updates. You can also watch this video from the blog post:

## October 2019 Update (2.74.5619.621)

Our October updates were as fun as a pumpkin patch run, and more exciting than a midnight tour through a haunted mansion.

- [Power BI Desktop](#)
- [Power BI service](#)

You can now [download the latest version of Power BI Desktop](#), now delivered as a single .exe file that contains all supported languages. If you're running Windows 10, you can also get [Power BI Desktop](#) from the Windows Store. The monthly versions are the same even though the version numbering may differ between the two, regardless of which way you install [Power BI Desktop](#). See [this article](#) for more information.

### IMPORTANT

Power BI Desktop is only released as a single .exe file that contains all supported languages. The .msi version is no longer being released.

The links beside each update mean the following:

- [\[video\]](#) excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [\[article\]](#) that provides more detail.
- Most features are explained in the monthly update [\[blog\]](#) post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the [Latest Updates](#) video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following updates are new to [Power BI Desktop](#) this month:

## Reporting

- Automatic page refresh for DirectQuery [[video](#)] [[article](#)] [[blog](#)]

## Analytics

- The new Q&A visual [[video](#)] [[blog](#)]
- Improved user experience for Q&A [[video](#)] [[blog](#)]
  - Improved drop-down control
  - Red and blue underlines
  - Improved visual results
- Natural language improvements for Q&A [[video](#)] [[blog](#)]
  - Integration with Office / Bing thesaurus
  - Support for measure tables, and better handling of table names and ambiguity
- Q&A tooling (preview) [[video](#)] [[blog](#)]
  - Review questions
  - Teach Q&A
  - Review all changes made
- Support for SSAS and Azure AS, including RLS [[video](#)] [[blog](#)]

## Visuals

- PowerApps visual now included by default [[video](#)] [[blog](#)]
- New xViz visuals [[video](#)] [[blog](#)]

## Data connectivity

- Sagra Emigo connector generally available [[video](#)] [[blog](#)]
- Azure cost Management connector updated [[video](#)] [[article](#)] [[blog](#)]
- New Workplace Analytics connector [[video](#)] [[blog](#)]

## Data preparation

- Query diagnostics [[video](#)] [[blog](#)]
- Data profiling enhancements [[video](#)] [[blog](#)]

## Template apps

- Project Web App [[video](#)] [[blog](#)]

## Other

- New file format: .PBIDS [[video](#)] [[article](#)] [[blog](#)]
- Performance improvements for modeling operations [[video](#)] [[blog](#)]

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

## September 2019 Update (2.73.5586.561)

Our September updates were like an exciting return to school - new things to learn, updates to friends we missed over the summer, and opportunities to apply what we know into better future reports.

- [Power BI Desktop](#)
- [Power BI service](#)

You can now [download the latest version of Power BI Desktop](#), now delivered as a single .exe file that contains all supported languages. If you're running Windows 10, you can also get **Power BI Desktop** from the Windows Store. The monthly versions are the same even though the version numbering may differ between the two, regardless of which way you install **Power BI Desktop**. See [this article](#) for more information.

#### IMPORTANT

Power BI Desktop is only released as a single .exe file that contains all supported languages. The .msi version is no longer being released.

The links beside each update mean the following:

- [video] excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [article] that provides more detail.
- Most features are explained in the monthly update [blog] post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following updates are new to **Power BI Desktop** this month:

#### Reporting

- Color and text classes in themes [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- New default themes [\[video\]](#) [\[blog\]](#)
- Personalized visualization pane improvements (preview) [\[video\]](#) [\[blog\]](#)

#### Analytics

- Custom format strings [\[video\]](#) [\[blog\]](#)
- Conditional formatting for more visual formatting options [\[video\]](#) [\[blog\]](#)
- Drillthrough discoverability improvement [\[video\]](#) [\[blog\]](#)
- New DAX expressions: REMOVEFILTERS and CONVERT [\[video\]](#) [\[blog\]](#)

#### Visuals

- PowerApps visual now generally available [\[video\]](#) [\[blog\]](#)

#### Data connectivity

- PostgreSQL connector enhancements [\[video\]](#) [\[blog\]](#)

#### Data preparation

- Copy to clipboard from data profiling [\[video\]](#) [\[blog\]](#)

#### Template apps

- Google Analytics report [\[blog\]](#)

#### Other

- Performance improvements for multi-dimensional models [\[video\]](#) [\[blog\]](#)
- Query performance improvements for DirectQuery models [\[video\]](#) [\[blog\]](#) <https://youtu.be/neq0THnRJzo?t=1208>

#### **NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/neq0THnRJzo>

## August 2019 Update (2.72.5556.801)

Our August updates were hot and shone brightly on the reports you create in Power BI.

- [Power BI Desktop](#)
- [Power BI service](#)

You can now [download the latest version of Power BI Desktop](#), now delivered as a single .exe file that contains all supported languages. If you're running Windows 10, you can also get **Power BI Desktop** from the Windows Store. The monthly versions are the same even though the version numbering may differ between the two, regardless of which way you install **Power BI Desktop**. See [this article](#) for more information.

The links beside each update mean the following:

- [video] excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [article] that provides more detail.
- Most features are explained in the monthly update [blog] post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following updates were new to **Power BI Desktop** this month:

### **Reporting**

- Grouping visuals [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Filter pane migration [\[video\]](#) [\[blog\]](#)
- Icon style picker for conditional formatting of icons [\[video\]](#) [\[blog\]](#)
- Conditional formatting warnings [\[video\]](#) [\[blog\]](#)

### **Analytics**

- Key influencers visual improvements, general availability [\[video\]](#) [\[blog\]](#)

### **Visuals**

- New Power BI visuals and updates [\[video\]](#) [\[blog\]](#)

### **Data connectivity**

- Support for SAP HANA HDI Containers [\[video\]](#) [\[blog\]](#)
- Edit SAP variables in the Power BI service (preview) [\[video\]](#) [\[blog\]](#)
- PostgreSQL DirectQuery [\[video\]](#) [\[blog\]](#)
- MarkLogic connector now generally available [\[video\]](#) [\[blog\]](#)
- New Power Platform category within Get Data [\[video\]](#) [\[blog\]](#)

### **Template apps**

- Facebook Pages - basic analytics [\[blog\]](#)

#### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/sf4n7VXoQHY>

## July 2019 Update (2.71.5523.641)

Our July updates were skyrocketing with colorful bursts of new features and functionality for your Power BI.

- [Power BI Desktop](#)
- [Power BI service](#)

You can now [download the latest version of Power BI Desktop](#). If you're running Windows 10, you can also get [Power BI Desktop](#) from the Windows Store. The monthly versions are the same even though the version numbering may differ between the two, regardless of which way you install [Power BI Desktop](#). See [this article](#) for more information.

The links beside each update mean the following:

- [\[video\]](#) excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [\[article\]](#) that provides more detail.
- Most features are explained in the monthly update [\[blog\]](#) post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the [Latest Updates](#) video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following updates were new to [Power BI Desktop](#) this month:

### Reporting

- Icon sets for table and matrix [\[video\]](#) [\[blog\]](#)
- Percent support for conditional formatting by rules [\[video\]](#) [\[blog\]](#)
- New filter pane is now generally available [\[video\]](#) [\[blog\]](#)
- Data colors support when using play axis on scatter charts [\[video\]](#) [\[blog\]](#)
- Performance improvements when using relative date and dropdown slicers [\[video\]](#) [\[blog\]](#)

### Analytics

- Counts for Key influencers visual (preview) [\[video\]](#) [\[blog\]](#)
- Aggregations improvements [\[video\]](#) [\[blog\]](#)

### Visuals

- PowerApps visual is now certified [\[video\]](#) [\[blog\]](#)
- Three new Power BI visuals and updates [\[video\]](#) [\[blog\]](#)

### Data connectivity

- Azure Data Lake Storage Gen2 connector (beta) [\[video\]](#) [\[blog\]](#)
- Dynamics 365 Customer Insights connector [\[video\]](#) [\[blog\]](#)

## Data preparation

- New transform: Split column by positions [\[video\]](#) [\[blog\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/I7OMRUF9UYg>

## June 2019 Update (2.70.5494.561)

Our June updates spread sunshine and blue skies on your reports, with a refreshing and bright new color scheme for your Power BI, and a host of other improvements.

- [Power BI Desktop](#)
- [Power BI service](#)

You can now [download the latest version of Power BI Desktop](#). If you're running Windows 10, you can also get [Power BI Desktop](#) from the Windows Store. The monthly versions are the same even though the version numbering may differ between the two, regardless of which way you install [Power BI Desktop](#). See [this article](#) for more information.

The links beside each update mean the following:

- [\[video\]](#) excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [\[article\]](#) that provides more detail.
- Most features are explained in the monthly update [\[blog\]](#) post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the [Latest Updates](#) video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following updates were new to Power BI Desktop this month:

### Reporting

- Updated pane design [\[video\]](#) [\[blog\]](#)
- Visual level filters for slicers [\[video\]](#) [\[blog\]](#)
- Sorting for the performance analyzer pane [\[video\]](#) [\[blog\]](#)
- Conditional formatting updates for formatting options [\[video\]](#) [\[blog\]](#)
- Visual header tooltips [\[video\]](#) [\[blog\]](#)
- Table and matrix total label customization [\[video\]](#) [\[blog\]](#)
- Sync slicer support for hierarchy slicer [\[video\]](#) [\[blog\]](#)
- Consistent font sizes across visuals [\[video\]](#) [\[blog\]](#)

### Analytics

- Key influencers visual updates (preview) [\[video\]](#) [\[blog\]](#)
  - Key influencers with Live connect to Power BI datasets
  - Key influencers accessibility
  - Support for Cloud RLS

- Manage aggregations dialog accessibility [[video](#)] [[blog](#)]

## Modeling

- New == DAX comparison operator [[video](#)] [[blog](#)]

## Visuals

- Personalized visualization pane (preview) [[video](#)] [[blog](#)]
- Three new Power BI visuals and updates [[video](#)] [[blog](#)]

## Data connectivity

- Connect to shared and certified datasets [[video](#)] [[blog](#)]
- Common Data Service connector is now generally available [[video](#)] [[blog](#)]
- Azure Data Explorer connector is now generally available [[video](#)] [[blog](#)]
- Enhancements to the Cosmos DB connector [[video](#)] [[blog](#)]
- Entersoft data connector [[video](#)] [[blog](#)]

## Data preparation

- Improvements to M Intellisense [[video](#)] [[blog](#)]

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/7k-nP38uHyQ>

## May 2019 Update (2.69.5467.1251)

Our May updates bloomed in your garden of great reports, with compelling new features and a flower pot full of colorful, beautiful visuals.

- [Power BI Desktop](#)
- [Power BI service](#)

You can now [download the latest version of Power BI Desktop](#). If you're running Windows 10, you can also get **Power BI Desktop** from the Windows Store. The monthly versions are the same even though the version numbering may differ between the two, regardless of which way you install **Power BI Desktop**. See [this article](#) for more information.

The links beside each update mean the following:

- [[video](#)] excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [[article](#)] that provides more detail.
- Most features are explained in the monthly update [[blog](#)] post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following updates were new to **Power BI Desktop** this month:

## Reporting

- Performance Analyzer pane [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Filter pane improvements (preview) [\[video\]](#) [\[blog\]](#)
- Table and matrix keyboard navigation [\[video\]](#) [\[blog\]](#)
- Line data label position control [\[video\]](#) [\[blog\]](#)
- KPI visual indicator text size control [\[video\]](#) [\[blog\]](#)

## Analytics

- Key influencers visual improvements (preview) [\[video\]](#) [\[blog\]](#)
  - Binning support
  - Formatting options
  - Mobile support

## Modeling

- Disable auto-date tables for new reports [\[video\]](#) [\[blog\]](#)
- Update to the ALLSELECTED DAX function [\[video\]](#) [\[blog\]](#)

## Visuals

- ArcGIS maps for Power BI updates [\[video\]](#) [\[blog\]](#)
- Six new Power BI visuals and updates [\[video\]](#) [\[blog\]](#)

## Data connectivity

- Essbase connector - support for Native Query (MDX) [\[video\]](#) [\[blog\]](#)
- Intune Data Warehouse connector [\[video\]](#) [\[blog\]](#)
- Tenforce connector [\[video\]](#) [\[blog\]](#)
- Roamler connector [\[video\]](#) [\[blog\]](#)

## Other

- Automatic query cancellation for Power BI Desktop [\[blog\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/O8GIHDz8xUQ>

## April 2019 Update (2.68.5432.361)

Our April updates were packed full of updates that put spring in your step on rainy days.

- [Power BI Desktop](#)
- [Power BI service](#)

You can now [download the latest version of Power BI Desktop](#). If you're running Windows 10, you can also get [Power BI Desktop](#) from the Windows Store. The monthly versions are the same even though the version numbering may differ between the two, regardless of which way you install [Power BI Desktop](#). See [this article](#) for more information.

The links beside each update mean the following:

- [video] excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [article] that provides more detail.
- Most features are explained in the monthly update [blog] post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following updates were new to Power BI Desktop this month:

## Reporting

- Filter pane improvements [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Conditional formatting for visual titles [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Conditional formatting for web URL actions for buttons, shapes and images [\[video\]](#) [\[blog\]](#)

## Analytics

- Drill through across reports [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Key Influencers visual now supports continuous analysis for numeric targets [\[video\]](#) [\[blog\]](#)
- Python support not generally available [\[video\]](#) [\[blog\]](#)
- Partial synonym matching for terms in Q&A [\[video\]](#) [\[blog\]](#)

## Modeling

- New DAX function - ALLCROSSFILTERED [\[video\]](#) [\[blog\]](#)

## Power BI visuals

- One new custom visual [\[blog\]](#)

## Data connectivity

- Power BI dataflows connector now generally available [\[video\]](#) [\[blog\]](#)
- Oracle Essbase connector now supports DirectQuery, and is generally available [\[video\]](#) [\[blog\]](#)
- PDF connector now generally available [\[video\]](#) [\[blog\]](#)
- Web By Example connector - automatic table inference [\[video\]](#) [\[blog\]](#)
- Intersystems IRIS connector [\[video\]](#) [\[blog\]](#)
- Indexima connector [\[video\]](#) [\[blog\]](#)
- Luminis InformationGrid connector [\[video\]](#) [\[blog\]](#)
- Solver BI360 connector [\[video\]](#) [\[blog\]](#)
- Paxata connector [\[video\]](#) [\[blog\]](#)

## Data preparation

- Data Profiling enhancements and general availability [\[video\]](#) [\[blog\]](#)
- Fuzzy merge performance enhancements and general availability [\[video\]](#) [\[blog\]](#)
- M Intellisense supported in formula bar and custom column dialog, and is generally available [\[video\]](#) [\[blog\]](#)

## Other

- Power BI Report Builder [\[blog\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video channel describes and shows each of these updates. You can also see the videos from the blog post.

<https://www.youtube.com/embed/vih35kSrEHU>

## March 2019 Update (2.67.5404.581)

Our March updates were packed full of compelling and useful updates, and we hope these improvements make you feel as lucky as finding a four-leaf clover.

- [Power BI Desktop](#)
- [Power BI service](#)

You can now [download the latest version of Power BI Desktop](#). If you're running Windows 10, you can also get **Power BI Desktop** from the Windows Store. The monthly versions are the same even though the version numbering may differ between the two, regardless of which way you install **Power BI Desktop**. See [this article](#) for more information.

The links beside each update mean the following:

- [video] excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [article] that provides more detail.
- Most features are explained in the monthly update [blog] post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following updates were new to **Power BI Desktop** in March:

### Reporting

- Single select slicer [\[video\]](#) [\[blog\]](#)
- Heat map support for Bing maps [\[video\]](#) [\[blog\]](#)
- Cross-highlight by axis labels [\[video\]](#) [\[blog\]](#)
- Default tooltip formatting [\[video\]](#) [\[blog\]](#)
- Static web URL support for buttons, shapes and images [\[video\]](#) [\[blog\]](#)
- Filter pane improvements [\[video\]](#) [\[blog\]](#)
- Page alignment options [\[video\]](#) [\[blog\]](#)
- Selection pane improvements [\[video\]](#) [\[blog\]](#)
- Formatting updates for maps [\[video\]](#) [\[blog\]](#)
- Accessible visual interaction [\[video\]](#) [\[blog\]](#)

### Analytics

- Q&A recommendations for improving results [\[video\]](#) [\[blog\]](#)
- Show dates as a hierarchy now generally available [\[video\]](#) [\[blog\]](#)

### Modeling

- New modeling view now generally available [\[video\]](#) [\[blog\]](#)
- New DAX functions [\[video\]](#) [\[blog\]](#)

### Power BI visuals

- New certified Power BI visuals setting in the admin portal [\[video\]](#) [\[blog\]](#)
- Two new Power BI visuals [\[video\]](#) [\[blog\]](#)

## Data connectivity

- PDF connector now supports tables spanning multiple pages (preview) [\[video\]](#) [\[blog\]](#)
- Intelligent Plant's Industrial App Store connector [\[video\]](#) [\[blog\]](#)
- Azure Cost Management connector [\[video\]](#) [\[blog\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video channel describes and shows each of these updates. You can also see the videos from the blog post.

<https://www.youtube.com/embed/rBPGH6eYIto>

## February 2019 Update (2.66.5376.1681)

Our February updates made customers swoon and love all our new data connectors, features, and analytics enhancements. Just like a box of chocolates, you never know what you get... but with this February update, all changes were sweet and downright delicious.

- [Power BI Desktop](#)
- [Power BI service](#)

You can [download the latest version of Power BI Desktop](#). If you're running Windows 10, you can also get **Power BI Desktop** from the Windows Store. The monthly versions are the same even though the version numbering may differ between the two, regardless of which way you install **Power BI Desktop**. See [this article](#) for more information.

The links beside each update mean the following:

- [\[video\]](#) excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [\[article\]](#) that provides more detail.
- Most features are explained in the monthly update [\[blog\]](#) post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following updates are new to **Power BI Desktop** this month:

### Reporting

- Updates to the new filter pane (preview) [\[video\]](#) [\[blog\]](#)
- Cross-highlight on a single point in line charts [\[video\]](#) [\[blog\]](#)
- Word wrap on titles [\[video\]](#) [\[blog\]](#)
- Update default visual interaction to cross-filter [\[video\]](#) [\[blog\]](#)
- Rounded corners for visual borders [\[video\]](#) [\[blog\]](#)

### Analytics

- Key influencers visual (preview) [\[video\]](#) [\[blog\]](#)
- Insights questions in Q&A [\[video\]](#) [\[blog\]](#)
- Auto-generated suggested questions for Q&A explorer [\[video\]](#) [\[blog\]](#)
- Improved Python & R script editor [\[video\]](#) [\[blog\]](#)

## Power BI visuals

- Ten new Power BI visuals, new Power BI visuals feature [\[video\]](#) [\[blog\]](#)

## Data connectivity

- Microsoft Graph Security [\[video\]](#) [\[blog\]](#)
- Guidanz' BI Connector for OBIEE [\[video\]](#) [\[blog\]](#)
- MarkLogic [\[video\]](#) [\[blog\]](#)
- Kronos Workforce Dimensions [\[video\]](#) [\[blog\]](#)
- SurveyMonkey [\[video\]](#) [\[blog\]](#)
- Qubole Presto [\[video\]](#) [\[blog\]](#)
- Quick Base [\[video\]](#) [\[blog\]](#)
- Sagra Emigo [\[video\]](#) [\[blog\]](#)

## Other

- Improved Live connect and DirectQuery error messages [\[video\]](#) [\[blog\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video channel describes and shows each of these updates. You can also see the videos from the blog post.

<https://www.youtube.com/embed/dMD25wfElLg>

## January 2019 Update

- [Power BI Desktop](#)
- [Power BI service](#)

There was no Power BI Desktop release in January 2019 - we were all busy having a happy holiday, spending time with friends and family.

## December 2018 Update (2.65.5313.621)

Our December updates made sugar plums dance in our customers' heads, or at least created compelling data-driven visuals of said sugar plums.

You can now [download the latest version of Power BI Desktop](#). If you're running Windows 10, you can also get [Power BI Desktop](#) from the Windows Store. The monthly versions are the same even though the version numbering may differ between the two, regardless of which way you install [Power BI Desktop](#). See [this article](#) for more information.

The links beside each update mean the following:

- [\[video\]](#) excerpts play in a new browser tab, when the feature is being discussed.

- Some features have an [article] that provides more detail.
- Most features are explained in the monthly update [blog] post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following updates are new to **Power BI Desktop** this month:

## Reporting

- Smart guides for aligning objects on a page [video] [article] [blog]
- ArcGIS Maps for Power BI updates [video] [article] [blog]
- Fields list accessibility support [video] [article] [blog]
- Set tab order for objects on a page [video] [article] [blog]
- Tooltips for button visuals [video] [article] [blog]
- Updated icons for *Visual interactions* [video] [article] [blog]

## Analytics

- Live connect support for Q&A (preview) [video] [blog]

## Modeling

- DAX formula bar updates [video] [article] [blog]
- Data view accessibility support [video] [article] [blog]

## Power BI visuals

- One new custom visual [video] [blog]

## Data connectivity

- AtScale connector (Beta) [video] [blog]
- Oracle Essbase connector (Beta) [video] [article] [blog]

## Data preparation

- Fuzzy merge - support for Top N best matches [video] [blog]

## Other

- High contrast support for all panes and report footer [video] [article] [blog]
- Updated keyboard shortcut dialog [video] [article] [blog]

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video channel describes and shows each of these updates. You can also see the videos from the blog post.

<https://www.youtube.com/embed/AHNIkjRFdYI>

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

# November 2018 Update (2.64.5285.582)

Our November updates were a bountiful harvest of new features and functionality. So you could sit down with your family of data and analytics enthusiasts, pass the potatoes, and dig in to our feast of updates.

The following updates are new to **Power BI Desktop** in November:

## Reporting

- Expand and collapse matrix row headers [[video](#)] [[article](#)] [[blog](#)]
- Copy and paste between Desktop files [[video](#)] [[article](#)] [[blog](#)]
- Updated filtering experience (preview) [[video](#)] [[article](#)] [[blog](#)]
- Report accessibility improvements [[video](#)] [[article](#)] [[blog](#)]

## Analytics

- Color saturation on visuals upgraded to use conditional formatting [[video](#)] [[blog](#)]
- Follow up questions in the Q&A explorer [[video](#)] [[blog](#)]

## Modeling

- New modeling view (preview) [[video](#)] [[article](#)] [[blog](#)]
- Composite models now generally available [[video](#)] [[article](#)] [[blog](#)]
- Modeling accessibility improvements [[video](#)] [[article](#)] [[blog](#)]
- New DAX functions [[video](#)] [[blog](#)]

## Power BI visuals

- Five new Power BI visuals [[video](#)] [[blog](#)]

## Data connectivity

- Azure Developer Operations Server connector [[video](#)] [[blog](#)]
- PDF Connector support for Start Page and End Page parameters [[video](#)] [[article](#)] [[blog](#)]
- Improved Azure Consumption Insights connector [[video](#)] [[article](#)] [[blog](#)]

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video channel describes and shows each of these updates. You can also see the videos from the blog post.

<https://www.youtube.com/embed/1xsXXoyTxfk?controls=0>

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

# October 2018 Update (2.63.3272.40262)

Our October updates were spooky-good, frighteningly helpful, and sweeter than an orange bucket full of candy.

The following updates were new to **Power BI Desktop** in October:

## Reporting

- Search in filter cards [[video](#)] [[article](#)] [[blog](#)]
- Accessibility improvements for authoring experiences [[video](#)] [[article](#)] [[blog](#)]
- Performance improvements for ArcGIS Map [[video](#)] [[blog](#)]

## Modeling

- DAX editor improvements [[video](#)] [[article](#)] [[blog](#)]

## Analytics

- Composite models and aggregation support in the Power BI service (preview) [[video](#)] [[article - aggregations](#)] [[article - composite models](#)] [[blog](#)]
- Explain the increase for non-additive measures [[video](#)] [[blog](#)]

## Power BI visuals

- Five new Power BI visuals [[video](#)] [[blog](#)]

## Data connectivity

- Web by Example connector now generally available [[video](#)] [[article](#)] [[blog](#)]
- SAP BW connector implementation v2 now generally available [[video](#)] [[article](#)] [[blog](#)]
- SAP BW Message Server Connector now generally available [[video](#)] [[blog](#)]
- Vertica connector now generally available [[video](#)] [[blog](#)]
- Dynamics NAV and Dynamics 365 business Central connectors now generally available [[video](#)] [[blog](#)]
- New Dynamics 365 business Central On-premises connector [[video](#)] [[blog](#)]

## Data preparation

- Data Profiling in Power Query Editor (preview) [[video](#)] [[blog](#)]
- Fuzzy Matching options for Merge Queries (preview) [[video](#)] [[blog](#)]

## Other areas

- Control export data options for reports [[video](#)] [[blog](#)]
- Transport layer security settings [[video](#)] [[article](#)] [[blog](#)]

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video channel describes and shows each of these updates. You can also see the videos from the blog post.

<https://www.youtube.com/embed/cT3L2VzgBRU>

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## September 2018 Update (2.62.5222.582)

Our September updates were like settling in to an exciting new classroom. Hopefully you found these updates as useful as a handful of just-sharpened No. 2 pencils.

The following updates were new to **Power BI Desktop** this month:

## Reporting

- Dot plot layout support in scatter charts [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Copy value and selection from table and matrix visuals [\[video\]](#) [\[blog\]](#)
- Built-in report theme options [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Report page tooltips generally available, new Card support [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Accessibility improvements for analytics and formatting pane support [\[video\]](#) [\[blog\]](#)

## Analytics

- Aggregations (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)

## Power BI visuals

- Five new Power BI visuals [\[video\]](#) [\[blog\]](#)

## Data connectivity

- PDF file connector (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- SAP BW connector - support for measure properties [\[video\]](#) [\[blog\]](#)
- Dataflows connector (beta) [\[article\]](#) [\[blog\]](#)

## Data preparation

- M Intellisense [\[video\]](#) [\[blog\]](#)
- Add column from examples - support for text padding [\[video\]](#) [\[blog\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/Rzw2Wyl09kY>

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## August 2018 Update (2.61.5192.321)

Our August updates were august in their own right, and followed quickly on the heels of July's big releases. Hopefully you found these updates like a sunny day on the beach; dip your toes in, we think you'll find these updates feel just right.

The following updates were new to Power BI Desktop in August:

## Modeling

- Data categories for measures [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Statistical DAX functions [\[video\]](#) [\[blog\]](#)

## Reporting

- Export to PDF, and print your reports [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Create bookmark groups [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Theming is generally available [\[video\]](#) [\[article\]](#) [\[blog\]](#)

- Slicer restatement [\[video\]](#) [\[blog\]](#)

## Analytics

- Conditional formatting by values [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Python integration [\[video\]](#) [\[blog\]](#)
- Q&A improvements [\[video\]](#) [\[blog\]](#)

## Power BI visuals

- Five new Power BI visuals [\[video\]](#) [\[blog\]](#)

## Data connectivity

- Spark connector generally available [\[video\]](#) [\[blog\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/dgv5HhHxxe8>

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## July 2018 Update (2.60.5169.3201)

July's big updates were worthy of a fireworks show in their own right, with long-requested data and reporting features that launch your visuals sky-high, and burst with arcing displays of colorful insights.

The following updates were new to Power BI Desktop in July:

## Modeling

- Composite models (Preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Many-to-many relationships (Preview) (associated with composite models) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Storage mode (Preview) (associated with composite models) [\[video\]](#) [\[article\]](#) [\[blog\]](#)

## Reporting

- New visual header with more flexibility and formatting [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Wallpaper formatting [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Theming update - more visual and page control (Preview) [\[video\]](#) [\[blog\]](#)
- Tooltips for table and matrix [\[video\]](#) [\[blog\]](#)
- Turn tooltips off for visuals [\[video\]](#) [\[blog\]](#)
- Slicer accessibility [\[video\]](#) [\[blog\]](#)
- Formatting pane improvements [\[video\]](#) [\[blog\]](#)
- Stepped line support for line and combo charts [\[video\]](#) [\[blog\]](#)
- Turn off combo chart data labels for individual series [\[video\]](#) [\[blog\]](#)
- Sorting experience improvement [\[video\]](#) [\[blog\]](#)

## Analytics

- Distribution factor insights [\[video\]](#) [\[blog\]](#)

## Power BI visuals

- Power BI certified category [\[video\]](#) [\[blog\]](#)
- Disabling specific organizational visuals [\[video\]](#) [\[blog\]](#)
- Four new Power BI visuals [\[video\]](#) [\[blog\]](#)

## Data connectivity

- IBM DB2 DirectQuery connector (Preview) [\[video\]](#) [\[blog\]](#)
- Improvements to Web By Example connector [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- SAP HANA - default values for variables in Variable Input experience [\[video\]](#) [\[article\]](#) [\[blog\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/Mtig3rmlUe0>

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## June 2018 Update (2.59.5135.101)

The sun was shining on June's updates, with features and improvements that warmed up your reports and let you bask in the insights they provided.

The following updates were new to **Power BI Desktop** in June:

## Reporting

- High contrast support for reports [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Donut radius control [\[video\]](#) [\[blog\]](#)
- Pie and donut detail labels position control [\[video\]](#) [\[blog\]](#)
- Format data labels separately for each measure in a combo chart [\[video\]](#) [\[blog\]](#)
- Longer phone reports [\[video\]](#) [\[blog\]](#)

## Power BI visuals

- Two new Power BI visuals [\[video\]](#) [\[blog\]](#)

## Modeling

- Filtering and sorting in data view [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Improved locale filtering [\[video\]](#) [\[blog\]](#)

## Data connectivity

- SAP BusinessWarehouse connector improvements (new driver and improved performance, plus improved support for hierarchy variables) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Spark connector now supports Windows Authentication [\[video\]](#) [\[blog\]](#)
- OData V4 connector enhancements [\[video\]](#) [\[blog\]](#)

- ODBC connector improvements (folding support for Top Rows, ability to filter navigation by DSN catalog) [\[video\]](#) [\[blog\]](#)

## Other

- National cloud selector [\[video\]](#) [\[blog\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/4VpGtWSrssE>

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## May 2018 Update (2.58.5103.281)

May's updates were a blooming collection of features and improvements that we hope spread sunshine on your reports, and made them blossom with beautiful insights.

The following updates were new to **Power BI Desktop** in May:

### Reporting

- Conditional formatting by a different field [\[video\]](#) [\[blog\]](#)
- Advanced slicer syncing [\[video\]](#) [\[blog\]](#)
- Log axis improvements [\[video\]](#) [\[blog\]](#)
- Data label options for funnel chart [\[video\]](#) [\[blog\]](#)
- Set line stroke width to zero [\[video\]](#) [\[blog\]](#)

### Analytics

- Measure drillthrough [\[video\]](#) [\[article\]](#) [\[blog\]](#)

### Power BI Premium

- Incremental refresh (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)

### Power BI visuals

- Many new Power BI visuals [\[video\]](#) [\[blog\]](#)

### Data connectivity

- New **From Web** connector - by example data extraction (preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Common Data Service for Apps connector (beta) [\[video\]](#) [\[blog\]](#)
- Azure KustoDB connector (beta) [\[video\]](#) [\[blog\]](#)
- Google BigQuery and Azure HDInsight Spark connectors now generally available [\[video\]](#) [\[blog\]](#)
- Adobe Analytics connector update - support for multiple domain logins (preview) [\[video\]](#) [\[blog\]](#)
- Visual Studio Team Services connector update - analytics views support [\[video\]](#) [\[blog\]](#)
- OLE DB connector update - support for alternate Windows credentials [\[video\]](#) [\[blog\]](#)
- SAP BW DirectQuery connector update - improved technical name support [\[video\]](#) [\[blog\]](#)

## Data preparation

- Improvements to Add Column from Examples [\[video\]](#) [\[blog\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

[https://www.youtube.com/embed/-\\_GMCE1TLvQ](https://www.youtube.com/embed/-_GMCE1TLvQ)

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## April 2018 Update (2.57.5068.501)

We're not fooling about how happy we were with April's updates to **Power BI Desktop**. We showered the updates across a handful of areas, and hope they help you grow your future reports with amazing, beautiful visuals.

The following updates were new to **Power BI Desktop** in April:

### Reporting

- Q&A Explorer [\[video\]](#) [\[blog\]](#)
- Buttons to trigger actions [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Combo chart line styles [\[video\]](#) [\[blog\]](#)
- Improved default sort for visuals [\[video\]](#) [\[blog\]](#)
- Numeric slicer now generally available [\[video\]](#) [\[blog\]](#)

### Analytics

- Update your linguistic schema [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- New DAX function: COMBINEVALUES() [\[video\]](#) [\[blog\]](#)

### Power BI visuals

- Organizational visuals now generally available [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Many new Power BI visuals [\[video\]](#) [\[blog\]](#)

### Data connectivity

- Adobe Analytics connector now generally available [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- SAP HANA connector improvement: Port selection [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Dynamics 365 Business Central connector [\[video\]](#) [\[article\]](#) [\[blog\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

[https://www.youtube.com/embed/W\\_Nb73Od\\_AI](https://www.youtube.com/embed/W_Nb73Od_AI)

#### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## March 2018 Update ()

We were feeling lucky as a four-leaf clover about March's updates to **Power BI Desktop**. The following updates were new to **Power BI Desktop** in March:

### Reporting

- Report page tooltips [\[video\]](#) [\[blog\]](#)
- Bookmarking is now generally available [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Display units and precision control for Table and Matrix columns [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Turn off the visual header in Reading mode for a report [\[video\]](#) [\[blog\]](#)
- Improved default visual placement [\[video\]](#) [\[blog\]](#)

### Power BI visuals

- Many new Power BI visuals [\[video\]](#) [\[article\]](#) [\[blog\]](#)

### Data connectivity

- Visual Studio Team Services connector improvements [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- SAP HANA connector enhancements [\[video\]](#) [\[article\]](#) [\[blog\]](#)
  - DirectQuery multidimensional support is now generally available
  - SSL certificate validation support
- SAP BW DirectQuery now generally available [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Azure Analysis Services connector now generally available [\[video\]](#) [\[article\]](#) [\[blog\]](#)

### Other

- Improved error reporting [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- View previous errors you've encountered [\[video\]](#) [\[blog\]](#)

#### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/kul6MMzDh34>

#### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## February 2018 Update (2.55.5010.521)

Our hearts were full of love for the updates to **Power BI Desktop** in February, and we hope you found them

just as sweet as a box of chocolates.

The links beside each update mean the following:

- [video] excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [article] that provides more detail.
- Most features are explained in the monthly update [blog] post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video for this month from the beginning, right inside this article, by clicking on the **play** icon on the video image found below the list of updates.

The following updates were new to **Power BI Desktop** in February 2018:

## Reporting

- Multi-select data points across multiple pages [video] [article] [blog]
- Sync slicers across multiple pages of a report [video] [article] [blog]
- Numeric range slicer improvement - whole number snapping (Preview) [video] [article] [blog]
- Faster geocoding for Bing maps (web Preview) - up to 6x faster [video] [blog]
- Overflow data labels for bar and column charts visuals [video] [blog]
- Search the Formatting and Analytics panes [video] [article] [blog]

## Power BI visuals

- Organization Power BI visuals (Preview) [video] [article] [blog]

## Analytics

- Set a custom date table [video] [article] [blog]
- Quick measures are now generally available [video] [article] [blog]

## Data connectivity

- Improvements to DirectQuery over SAP HANA (Preview) [video] [article] [blog]

## Other

- DirectQuery performance improvements [video] [article] [blog]
- Open and save performance improvements [video] [blog]
- *Show items with no data* improvements [video] [blog]
- Persistent filters control for upcoming **Power BI service** feature [video] [blog]

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/KeVB5RwMzJo>

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

# January 2018 Update (2.54.4970.761)

We rang in the new year with a collection of updates to **Power BI Desktop**, and our new year's resolution is to keep them coming.

The links beside each update mean the following:

- [video] excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [article] that provides more detail.
- Most features are explained in the monthly update [blog] post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video for this month from the beginning, right inside this article, by clicking on the **play** icon on the video image found below the list of updates.

The following updates were new to **Power BI Desktop** in January:

## Reporting

- Show and hide pages [video] [blog]
- Control data label background color for Cartesian and maps visuals [video] [blog]
- Increase the area used for axis labels in charts [video] [blog]
- Bar / column padding control [video] [blog]
- Show dates as a hierarchy (preview) [video] [blog]
- Add an anchor date for a relative date slicer [video] [blog]
- Top N selection in Q&A [blog]
- Many new Power BI visuals [video] [blog]

## Analytics

- Correlation coefficient quick measure [blog]

## Data connectivity

- Support for Azure Active Directory authentication for Azure SQL Database and Data Warehouse connectors [video] [blog]

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/W8Pp5wuCXJw>

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

# December 2017 Update (2.53.4954.481)

December brought a Ho-Ho-Whole lot of updates to **Power BI Desktop**, chock full of features gifts for all business intelligence minded kids (and adults) to enjoy.

The links beside each update mean the following:

- [video] excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [article] that provides more detail.
- Most features are explained in the monthly update [blog] post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following updates were new to Power BI Desktop in December:

## Reporting

- Q&A for report creation [video] [blog]
- Cross-highlighting for bookmarks [video] [blog]
- More bookmark flexibility [video] [blog]
- Field properties pane and field descriptions [video] [blog]
- Scatter visual from x- and y-axis groupings [video] [blog]
- High density sampling for maps based on latitude and longitude [video] [blog]
- Responsive slicers [video] [blog]
- Recently released Power BI visuals [video] [blog]

## Analytics

- Drill filters other visuals [video] [blog]

## Data connectivity

- Adobe Analytics connector [video] [blog]
- HDInsight Interactive Query connector [video] [blog]
- Data.World connector [video] [blog]
- SAP BW connector improvements [video] [blog]
- IBM Netezza connector now generally available [video] [blog]

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/ZPU8B-1BxjI>

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## November 2017 Update (2.52.4921.202)

November brought a whole harvest worth of updates to **Power BI Desktop**.

The links beside each update mean the following:

- [video] excerpts play in a new browser tab, when the feature is being discussed.

- Some features have an [article] that provides more detail.
- Most features are explained in the monthly update [blog] post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following updates were new to Power BI Desktop in November:

## Reporting

- Rule-based conditional formatting for Table and Matrix visuals [[video](#)] [[blog](#)]
- Cell alignment for Table and Matrix visuals [[video](#)] [[blog](#)]
- Control visual ordering through the selection pane [[video](#)] [[blog](#)]
- Lock objects on your report [[video](#)] [[blog](#)]
- Esri Plus Subscription is available for ArcGIS Maps for Power BI [[video](#)] [[blog](#)]
- Report options for slow data sources [[video](#)] [[blog](#)]
- Filtering performance improvements [[video](#)] [[blog](#)]
- Recently released Power BI visuals [[video](#)] [[blog](#)]

## Analytics

- Cell-level formatting for multidimensional AS models for multi-row card [[video](#)] [[blog](#)]

## Data connectivity

- Impala connector - support for Windows Authentication [[video](#)] [[blog](#)]

## Other

- Query editing - Add Column from Example improvements [[video](#)] [[blog](#)]

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/sI3yRjdnJ7w>

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## October 2017 Update (2.51.4885.543)

October brought a frighteningly compelling group of useful updates to **Power BI Desktop**.

The links beside each update mean the following:

- [[video](#)] excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [article] that provides more detail.
- Most features are explained in the monthly update [blog] post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video from the beginning, right inside this article, by clicking on the play icon on the video image found below the list of updates.

The following updates are new to **Power BI Desktop** this month:

#### **Reporting:**

- Bookmarking (preview) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Selection pane and visual display controls [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Bookmark links for shapes and images [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Spotlight [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Scatter and Bubble markers [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Increase the number of data points displayed in Scatter visuals [\[video\]](#) [\[blog\]](#)

#### **Analytics:**

- Quick measures for SSAS live connections [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Sales from new customers quick measure [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Cell-level formatting for multi-dimensional Analysis Services (AS) models [\[video\]](#) [\[blog\]](#)

#### **Data Connectivity:**

- Vertica connector (beta) [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- SAP BW connector - support for additional member properties [\[video\]](#) [\[blog\]](#)

#### **Other:**

- Get Power BI Desktop from the Windows Store [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Improved access to help content [\[video\]](#) [\[blog\]](#)

#### **NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/jksjtR8GnBE>

#### **NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## September 2017 Update (2.50.4859.502)

The following updates are new to **Power BI Desktop** in September:

#### **Report View:**

- Drill through to another report page [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Ribbon chart [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Insights about Explain the increase / Explain the decrease [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Theming preview update - chart style controls [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Accessibility improvements [\[video\]](#) [\[blog\]](#) [\[article\]](#)
  - Accessible See data [\[video\]](#) [\[blog\]](#) [\[article\]](#)

- Keyboard shortcut helper dialog [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- High density scatter chart sampling [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Gridline style control [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- New Power BI visuals [\[video\]](#) [\[blog\]](#)
  - Calendar by Tallan [\[video\]](#) [\[blog\]](#)
  - Enlighten Aquarium [\[video\]](#) [\[blog\]](#)
  - Visio visual (preview) [\[video\]](#) [\[blog\]](#)
  - Impact bubble chart [\[video\]](#) [\[blog\]](#)

#### **Data Connectivity:**

- Azure Consumption Insights connector [\[video\]](#) [\[blog\]](#) [\[article\]](#)
- Improvements to the Dynamics 365 for Financials connector [\[video\]](#) [\[blog\]](#)

#### **NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/moTQJInCIJw>

#### **NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## August 2017 Update (2.49.4831.222)

The following updates were new to Power BI Desktop in August:

#### **Report View:**

- Show values on rows for matrix [\[video\]](#) [\[blog\]](#)
- Color scales on font colors for table and matrix [\[video\]](#) [\[blog\]](#)
- Custom subtotal settings per level of matrix [\[video\]](#) [\[blog\]](#)
- Line styles and legend options [\[video\]](#) [\[blog\]](#)
- Scatter chart performance improvements [\[video\]](#) [\[blog\]](#)
- New Power BI visuals [\[video\]](#) [\[blog\]](#)
  - Dot Plot by MAQ Software [\[video\]](#) [\[blog\]](#)
  - Power KPI [\[video\]](#) [\[blog\]](#)
  - Funnel plot [\[video\]](#) [\[blog\]](#)
  - Beyondsoft Calendar [\[video\]](#) [\[blog\]](#)

#### **Analytics & Modeling:**

- What if parameters [\[video\]](#) [\[blog\]](#)
- New scatter chart analytics features [\[video\]](#) [\[blog\]](#)
  - Symmetry shading [\[video\]](#) [\[blog\]](#)
  - Ratio lines [\[video\]](#) [\[blog\]](#)
- New quick measure: weighted average [\[video\]](#) [\[blog\]](#)

## Data Connectivity:

- Live connect to the Power BI service is generally available [\[video\]](#) [\[blog\]](#)
- Google BigQuery connector (beta) [\[video\]](#) [\[blog\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/ND8U0yXroaQ>

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## July 2017 Update (2.48.4792.321)

The following updates were new to Power BI Desktop in July:

### Report View:

- New table & matrix visuals are now generally available [\[video\]](#) [\[blog\]](#)
- Renaming fields in visuals [\[video\]](#) [\[blog\]](#)
- Power BI visuals store integration [\[video\]](#) [\[blog\]](#)
- Relative date filters [\[video\]](#) [\[blog\]](#)
- Responsive layout for visuals (preview) [\[video\]](#) [\[blog\]](#)
- New waterfall chart option - breakdown [\[video\]](#) [\[blog\]](#)
- Custom visual updates [\[video\]](#) [\[blog\]](#)
  - Drill-down Choropleth [\[video\]](#) [\[blog\]](#)
  - Drill-down Cartogram [\[video\]](#) [\[blog\]](#)
  - Drill-down Player [\[video\]](#) [\[blog\]](#)
  - Certified Power BI visuals [\[blog\]](#)

### Analytics & Modeling:

- Quick measures from the community [\[video\]](#) [\[blog\]](#)
  - Star rating [\[video\]](#) [\[blog\]](#)
  - Concatenated list of values [\[video\]](#) [\[blog\]](#)
- Bidirectional cross filtering for DirectQuery is now generally available [\[video\]](#) [\[blog\]](#)

### Data Connectivity:

- Snowflake connector general availability [\[video\]](#) [\[blog\]](#)

### Query Editing:

- *Add Column from Examples* enhancements [\[video\]](#) [\[blog\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post references in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/4X96ow7FnSY>

**NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## June 2017 Update (2.47.4766.542)

The following updates were new to Power BI Desktop in June:

**Report View:**

- Data bars for new table and matrix visuals (Preview) [\[video\]](#) [\[blog\]](#)
- Markers on line, area, and combo visuals (Preview) [\[video\]](#) [\[blog\]](#)
- Visual font family setting [\[video\]](#) [\[blog\]](#)
- Horizontal image slicer [\[video\]](#) [\[blog\]](#)
- Combo chart formatting updates [\[video\]](#) [\[blog\]](#)
- Bing maps improvements [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- High density line sampling [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Accessible reports [\[video\]](#) [\[article\]](#) [\[blog\]](#)

**Data Connectivity:**

- Custom Data Connectors support [\[video\]](#) [\[blog\]](#)
- **Power BI service** Live Connect to on-premises and push streaming datasets [\[video\]](#) [\[blog\]](#)
- Impala connector is now generally available [\[video\]](#) [\[blog\]](#)
- Amazon Redshift connector is now generally available [\[video\]](#) [\[blog\]](#)
- SAP BW connector - DirectQuery support [\[video\]](#) [\[blog\]](#)
- IBM Netezza connector (beta) [\[video\]](#) [\[blog\]](#)

**Query Editing:**

- *Add Column from Examples* enhancements [\[video\]](#) [\[article\]](#) [\[blog\]](#)

**NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post referenced in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/YINVE5dgcSI>

**NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## May 2017 Update (2.46.4732.461)

The following updates were new to Power BI Desktop in May:

#### **Report View:**

- Relative date slicer (Preview) [\[video\]](#) [\[blog\]](#)
- New table visual (Preview) [\[video\]](#) [\[blog\]](#)
- Combo chart data label enhancements [\[video\]](#) [\[blog\]](#)
- More URL support in table and matrix visuals [\[video\]](#) [\[blog\]](#)
- mailto links in textbox [\[video\]](#) [\[blog\]](#)

#### **Analytics:**

- Report level measures for live connections to Analysis Services tabular models and Power BI service datasets [\[video\]](#) [\[blog\]](#)
- Two new quick measures (Preview) [\[video\]](#) [\[blog\]](#)
- Bin by count [\[video\]](#) [\[blog\]](#)

#### **Data Connectivity:**

- Combine files - ability to reference *First File* as example [\[video\]](#) [\[blog\]](#)
- New data connectors:
  - Dynamics 365 for Customer Insights [\[video\]](#) [\[blog\]](#)

#### **Query Editing:**

- Two new transforms:
  - Extract text before/after/between delimiters [\[video\]](#) [\[blog\]](#)
  - Unpivot only selected columns [\[video\]](#) [\[blog\]](#)

#### **NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post referenced in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/CKISVNHcHVA>

#### **NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## April 2017 Update (2.45.4704.442)

The following updates were new to Power BI Desktop in April 2017:

#### **Report View:**

- Rename axis titles [\[video\]](#) [\[blog\]](#)
- New matrix visual enhancements: column sorting, column resizing, and word wrap (Preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)

#### **Analytics:**

- Quick measures [\[video\]](#) [\[blog\]](#) [\[in-depth blog\]](#) [\[article\]](#)
- Show value as [\[video\]](#) [\[blog\]](#)

- Q&A in Spanish (Preview) [\[video\]](#) [\[blog\]](#)

### **Data Connectivity:**

- Connect to datasets in the Power BI service (Preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- New or enhanced data connectors:
  - Redshift Connector: beta support, and Publish to Power BI service [\[video\]](#) [\[blog\]](#)
  - SAP HANA and BW: enhancements to parameter input experience [\[video\]](#) [\[blog\]](#)

### **Query Editing:**

- Add Column from Example [\[video\]](#) [\[article\]](#) [\[blog\]](#) [\[another blog\]](#)
- Split column (by delimiter/number of characters) into rows [\[video\]](#) [\[blog\]](#)
- Group by: basic mode [\[video\]](#) [\[blog\]](#)
- Go to column [\[video\]](#) [\[blog\]](#)

#### **NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post referenced in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/AWMalal8G2Y>

#### **NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## **March 2017 Update (2.44.4675.422)**

The following updates were new to Power BI Desktop in March 2017:

### **Report View:**

- New matrix visual (Preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Numeric range slicer (Preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)
- Data labels on pie and donut visuals - percent of total [\[video\]](#) [\[blog\]](#)
- Cross-highlight using multiple series [\[video\]](#) [\[blog\]](#)
- Textbox - ability to choose font color [\[video\]](#) [\[blog\]](#)
- Report theming (Preview) [\[video\]](#) [\[article\]](#) [\[blog\]](#)

### **Analytics:**

- Clustering - now generally available [\[video\]](#) [\[blog\]](#)

### **Data Connectivity:**

- New or enhanced data connectors [\[video\]](#):
  - Azure Analysis Services database (Beta) [\[blog\]](#)
  - Azure Data Lake Store - now generally available [\[blog\]](#)
  - DB2 connector - option to specify package collection [\[video\]](#) [\[blog\]](#)
  - Combine binaries - specify a sample file to use [\[video\]](#) [\[blog\]](#)

### **Query Editing improvements**

- Split column by delimiter - automatic detection of delimiter character [[video](#)] [[blog](#)]

**NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post referenced in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/CaRTON3IJqw>

**NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## February 2017 Update (2.43.4647.541)

The following updates were new to Power BI Desktop in February:

**Report View:**

- Word wrap on matrix row headers [[video](#)] [[blog](#)]
- X- and Y-axis font size control [[video](#)] [[blog](#)]
- Cartesian chart minimum category width [[video](#)] [[blog](#)]
- Line chart line thickness and join type controls [[video](#)] [[blog](#)]

**Analytics:**

- Two new Quick Calcs: Percent of row total, and percent of column total [[video](#)] [[blog](#)]

**Data Connectivity:**

- New or enhanced data connectors [[video](#)]:
  - ODBC and OLE DB connectors - support for *Select related tables* [[blog](#)]
  - Enhanced Folder connector - support for combining binaries from the Preview dialog [[video](#)] [[blog](#)]
  - Unified Text and CSV connectors [[video](#)] [[blog](#)]
  - **New** - PowerApps Common Data Service connector [[blog](#)]

**Query Editing improvements**

- Quickly change a column's data type and locale with the new *Using locale* option in the *Column headers type* menu [[video](#)] [[blog](#)]
- Easily insert steps into existing queries, using the new *Insert Step After* option [[video](#)] [[blog](#)]

**Other improvements**

- Solutions Templates and Partner Showcase quick access [[video](#)] [[blog](#)]

**NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post referenced in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/mn75-LOPxMA>

**NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## January 2017 Update (2.42.4611.482)

The following updates are new to Power BI Desktop in January:

**Report View:**

- Table and matrix conditional formatting improvement - blank formatting [\[video\]](#) [\[blog\]](#)
- New aggregations for string and dateTime columns [\[video\]](#) [\[blog\]](#)
- Table header word wrap [\[video\]](#) [\[blog\]](#)
- General Availability (GA) of Phone reports [\[video\]](#) [\[blog\]](#)

**Data Connectors:**

- New or enhanced data connectors [\[video\]](#):
  - Visual Studio Team Services connector (Beta) [\[video\]](#) [\[blog\]](#)
  - Enhanced SQL Server connector - support for SQL Failover option [\[video\]](#) [\[blog\]](#)

### Query Editing improvements

- New transform: extract values from a nested list [\[video\]](#) [\[blog\]](#)

**NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post referenced in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/C1-f0T8vZ7M>

**NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## November 2016 Update (2.41.4581.301)

The following updates were new to Power BI Desktop in November:

**Report View:**

- Hierarchical axis [\[video\]](#) [\[blog\]](#)
- Axis label and title color control [\[video\]](#) [\[blog\]](#)
- Matrix conditional formatting [\[video\]](#) [\[blog\]](#)
- Table and matrix column formatting [\[video\]](#) [\[blog\]](#)
- Drop-down slicer [\[video\]](#) [\[blog\]](#)
- Mobile reports scrolling [\[video\]](#) [\[blog\]](#)

**Analytics**

- Clustering (preview) [\[video\]](#) [\[blog\]](#)
- Forecasting (now in the Power BI service) [\[blog\]](#)
- Groups (now on the ribbon) [\[video\]](#) [\[blog\]](#)

#### **Data Connectors:**

- New data connectors [\[video\]](#):
  - Spark DirectQuery [\[video\]](#) [\[blog\]](#)
  - OData connector improvements [\[video\]](#) [\[blog\]](#)
  - Enhanced *combine binaries* experience [\[video\]](#) [\[blog\]](#)
  - Azure Analysis Services [\[video\]](#) [\[blog\]](#)

#### **Query Editing improvements**

- Improved *function authoring* experience [\[video\]](#) [\[blog\]](#)
- Support for *percentage* data type [\[video\]](#) [\[blog\]](#)
- Added **Maximize** and **Restore** buttons in **Navigator** and **Query Dependencies** [\[video\]](#) [\[blog\]](#)

#### **NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post referenced in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

[https://www.youtube.com/embed/kERJ\\_WOLuLk](https://www.youtube.com/embed/kERJ_WOLuLk)

#### **NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## October 2016 Update (2.40.4554.361)

The following updates were new to Power BI Desktop in October:

#### **Report View:**

- Improved date axis range formatting [\[video\]](#)
- Date slicer [\[blog\]](#) [\[video\]](#)
- Report gridlines and snap to grid (Preview) [\[article\]](#) [\[blog\]](#) [\[video\]](#)
- Data label improvements [\[blog\]](#) [\[video\]](#)
- Map formatting options [\[blog\]](#) [\[video\]](#)
- Improved date axis range formatting [\[blog\]](#)

#### **Analytics**

- Grouping [\[blog\]](#) [\[video\]](#)
- Binning [\[blog\]](#) [\[video\]](#)
- Top-N filter [\[blog\]](#) [\[video\]](#)
- Include/exclude data points [\[blog\]](#) [\[video\]](#)
- R-powered Power BI visuals [\[blog\]](#)

#### **Data Connectors:**

- New data connectors [\[video\]](#):

- Microsoft Dynamics 365 for Financials (Beta) [\[blog\]](#)
- OLE DB [\[blog\]](#)
- Mixpanel [\[blog\]](#)

### **Query Editing improvements**

- Support for *table parameters* in the **Invoke Function** dialog [\[blog\]](#) [\[video\]](#)

### **Other improvements**

- Diagnostics information in the **About** dialog [\[blog\]](#) [\[video\]](#)

#### **NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post referenced in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/UXEY SvgvMaQ>

#### **NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## September 2016 Update (2.39.4526.362)

The following updates were new to Power BI Desktop in September:

### **Report View:**

- ArcGIS Maps for Power BI (Preview) [\[blog\]](#) [\[video\]](#)
- Mobile report layout (Preview) [\[blog\]](#) [\[video\]](#)
- Updated drill behavior [\[article\]](#) [\[blog\]](#) [\[video\]](#)

### **Analytics**

- Forecasting (Preview) [\[article\]](#) [\[blog\]](#) [\[video\]](#)
- Use your own R IDE [\[blog\]](#) [\[video\]](#)

### **Data Connectors:**

- New data connectors:
  - Snowflake connector DirectQuery support [\[blog\]](#)
  - ProjectPlace connector [\[article\]](#) [\[blog\]](#)
- Improvements to existing connectors:
  - Oracle connector - improved Navigator previews performance [\[blog\]](#)
  - OData connector - support for *Select Related Tables* option [\[blog\]](#)
  - SAP Business Warehouse and SAP HANA connectors - enhancements to parameter input interface [\[article\]](#) [\[blog\]](#)
  - Web connector - support for specifying HTTP request headers within the dialog [\[blog\]](#) [\[video\]](#)

### **Query Editor improvements:**

- Query Dependencies view [\[blog\]](#) [\[video\]](#)
- Show Errors experience [\[blog\]](#)

- Query Editor ribbon support for scalar values [\[blog\]](#)
- Add function invocation column [\[blog\]](#)
- Expand & Aggregate columns - support for *Load More* values [\[blog\]](#)
- New transform - convert Table Column to a list [\[blog\]](#)
- Key boarding - support for *smart typing* in drop-down menus [\[blog\]](#)

## Other improvements

- In-product links to the Power BI Community [\[blog\]](#) [\[video\]](#)

### NOTE

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post referenced in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

[https://www.youtube.com/embed/pcUr6E8g\\_KI](https://www.youtube.com/embed/pcUr6E8g_KI)

### NOTE

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## August 2016 Update (2.38.4491.282)

August introduced a full harvest of new features for Power BI Desktop:

- [\[video\]](#) excerpts play in a new browser tab, when the feature is being discussed.
- Some features have an [\[article\]](#) that provides more detail.
- Most features are explained in the monthly update [\[blog\]](#) post.
- Lastly, some features are self-explanatory and don't need an article or video.

You can also watch the **Latest Updates** video from the beginning, right inside this article, by clicking on the **play** icon on the video image found below the list of updates.

The following updates are new to Power BI Desktop this month:

### Report View:

- Drill down (or back up) on line charts [\[blog\]](#) [\[video\]](#)
- Continuous axis for the Date axis [\[blog\]](#) [\[video\]](#)
- General availability of Inline Hierarchies [\[article\]](#) [\[blog\]](#) [\[video\]](#)
- Predefined matrix styles (similar to table formatting in Excel) [\[blog\]](#) [\[video\]](#)
- Reorder fields, in charts and tooltips [\[blog\]](#) [\[video\]](#)
- Color formatting for KPI visuals [\[blog\]](#) [\[video\]](#)

### Analytics (New!)

- The all-new Analytics pane [\[article\]](#) [\[blog\]](#) [\[video\]](#)
- Dynamic reference lines [\[blog\]](#) [\[video\]](#)

### Data Connectors:

- New data connectors:
  - Snowflake connector (Preview) [\[blog\]](#)

- Improvements to existing connectors:
  - Impala connector - DirectQuery support [\[article\]](#) [\[blog\]](#)
  - Web connector - Web page previews [\[blog\]](#) [\[video\]](#)
  - General availability for the SAP Business Warehouse connector [\[article\]](#) [\[blog\]](#)

#### **Query Editor improvements:**

- Option to Merge/Append as New Query [\[blog\]](#) [\[video\]](#)

#### **Other improvements**

- Auto-recover Desktop files [\[blog\]](#) [\[video\]](#)

#### **NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features (this is the same blog post referenced in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/0VvG7Eqoke8>

#### **NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## July 2016 Update (2.37.4464.321)

You can always [download the latest version of Power BI Desktop](#).

July brought another great collection of new features and highly anticipated data connectors to Power BI Desktop. The following enhancements were new to Power BI Desktop in July:

#### **Report View:**

- Predefined table styles [\[blog\]](#) [\[video\]](#)
- Shape Maps update - use custom maps [\[article\]](#) [\[blog\]](#) [\[video\]](#)

#### **Data Connectors:**

- New data connectors:
  - Amazon Redshift [\[article\]](#) [\[blog\]](#)
  - Impala [\[article\]](#) [\[blog\]](#)
- Improvements to existing connectors:
  - Web connector - support for specifying a connection timeout [\[blog\]](#)
  - CSV and Text - support for fixed-width delimited files [\[blog\]](#)
  - Improvements and changes to the SAP Business Warehouse connector [\[article\]](#) [\[blog\]](#)

#### **Query Editor improvements:**

- Use R script in Query Editor [\[article\]](#) [\[blog\]](#)
- Query parameter enhancements:
  - List query output as *allowed values* for a parameter [\[blog\]](#)
- Overwrite existing user-defined functions [\[blog\]](#)

**NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these features (this is the same blog post referenced in the list above).

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/g8ccfjffWmw>

**NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## June 2016 Update (2.36.4434.362)

You can always [download the latest version of Power BI Desktop](#).

June provided a shining collection of interesting updates for Power BI Desktop.

**Report View:**

- New visual - Shape Maps [\[video\]](#) [\[article\]](#)
- Searchable slicers [\[video\]](#) [\[blog\]](#)
- Configurable line chart labels [\[video\]](#) [\[blog\]](#)
- New sign-in entry points [\[video\]](#) [\[blog\]](#)

**Data Access:**

- Row Level Security [\[blog\]](#) [\[article\]](#)

**Data Connectors:**

- New data connector: [\[blog\]](#)
  - Azure Enterprise
- Enhanced SAP BW and HANA connectors: [\[blog\]](#)
  - Allow multi-select of values for Variables/Parameters
  - Support for Hierarchies in SAP BW
- Enhanced OData connector - imports Open Type columns [\[blog\]](#)
- Enhanced Access DB connector - button to **Select Related Tables** in Navigator dialog [\[blog\]](#)

**Data Connectors:**

- Templates - option to Load or Edit [\[blog\]](#)
- Query parameter enhancements: [\[blog\]](#)
  - Option to always allow Parameter specification
  - Create new parameter directly in context
- Option to generate Step Names in English [\[blog\]](#)
- Descriptions for Query Steps [\[video\]](#) [\[blog\]](#)
- New Data Transformations: [\[blog\]](#)
  - Extract Week Day and Month Name from a DateTime column
  - Merging dates and Times into a DateTime column
  - Extract Time.Start/End of Hour/Minute/Second

**NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features.

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/sZsL2l6oS4A>

**NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## May 2016 Update (2.35.4399.381)

You can always [download the latest version of Power BI Desktop](#).

May brought another large collection of compelling updates for Power BI Desktop:

**Report View:**

- Customizable tooltips [\[video\]](#) [\[article\]](#)
- Conditional formatting in tables [\[video\]](#) [\[article\]](#)
- Publish to Pyramid server [\[blog\]](#)
- Scrolling loads more data in charts [\[video\]](#) [\[blog\]](#)
- Keyboard nudging for visuals [\[blog\]](#)

**Analytics**

- Quick Calcs - % of grand total [\[blog\]](#)

**Data Connectivity:**

- New data connectors: [\[blog\]](#)
  - Informix
  - comScore Digital Analytix
  - Troux
  - Planview Enterprise
- Improved DB2 connector [\[blog\]](#)
- Text/CSV connector exposes editable settings in preview dialog [\[blog\]](#)
- Improved relational database connectors with Display Schema information
- Data Source Settings enhancements [\[blog\]](#)
- Advanced **Filter Rows** dialog mode [\[blog\]](#)
- Inline Input controls for Function invocation within **Query Editor** [\[blog\]](#)
- Query Parameters: [\[blog\]](#)
  - Ability to convert queries to parameters (and vice versa)
  - Support for URL parameterization and multi-part URLs in **Web** connector
  - Support for parameterization in **Conditional Columns** dialog
- Ability to **Save As** a Power BI Template [\[blog\]](#)
- Support for reordering Query Steps using drag-and-drop [\[blog\]](#)
- Date picker support in **Conditional Columns** dialog input Date fields [\[blog\]](#)
- New context menu entry to create new queries from the **Queries** pane [\[blog\]](#)

**NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features.

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/KnDs4amt9-c>

**NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## April 2016 Update (2.34.4372.322)

You can always [download the latest version of Power BI Desktop](#).

In April, we showered our great Power BI customers with another collection of compelling updates for Power BI Desktop. The following enhancements are new to Power BI Desktop this month:

**Report View:**

- Additional styles on a table, matrix, and multi-row card
- Trend lines on single visuals
- New drill action - [See Records](#)
- Map auto-zoom during drill/filter
- In-line hierarchy labels for expanded view (Preview - [see the article](#))

**Data Modeling:**

- Modeling operations are no longer blocked while visuals are refreshing
- Time Intelligence with built-in date hierarchy fields (Preview)
- Data model synonyms

**Data Connectivity:**

- Query Parameters
- Power BI Template files
- New *Online Services* category in Get Data dialog
- New Connectors:
  - SharePoint Folder
  - Webtrends
  - SparkPost
  - tyGraph
- Conditional Columns
- DirectQuery - Specify DirectQuery vs. Import mode in data source dialogs
- Column type indicator in Query Editor preview column headers
- Reorder Queries and Query Groups using Drag & Drop gestures
- Query Management menu in the ribbon

**NOTE**

You can also [check out all the data sources available to Power BI Desktop](#); our list is always growing, so check back often.

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features.

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/7IFZTYJR3Gk>

**NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## March 2016 Update (2.33.4337.281)

You can now [download the latest version of Power BI Desktop](#).

March brings all sorts of renewal and freshness, including another round of Power BI Desktop additions. The following enhancements are new to Power BI Desktop this month:

**Report View:**

- Publish reports to a Group Space in the Power BI service
- Reports with KPI trends now respect *Do Not Summarize* model settings from SSAS MD
- Data Point warnings are now non-intrusive

**Data Modeling:**

- You can now change the data type of a column when using DirectQuery mode
- Ability to assume Referential Integrity on relationships (for those imported, and created) in DirectQuery
- DirectQuery for Oracle and Teradata is now part of Power BI Desktop (no longer a preview feature)

**Data Connectivity:**

- A new SAP BW Connector (preview feature)
- Support for Command Timeout in the user interface (UI)
- There's a setting available to disable Privacy Level prompts at the machine level (including a registry key)
- Query Group Management enhancements:
  - Expand/Collapse All
  - Retain Query Group expansion state
- New Transformations:
  - Remove Blanks using the Column Filter menu
  - Convert Duration values to Years
  - Keep Duplicates
- Support for whitespace and line feeds in Query Editor preview
- Include hints for *sample input values* in the **Change Type with Locale** dialog
- Enhancements to the **Navigator** window:
  - Add schema information to navigation hierarchy for ODBC sources
  - Ability to disable preview from **Navigator**
  - Technical name support
- Load: Auto-step to disambiguate conflicting column names (case-insensitive comparison)
- You can now rename queries directly from the **Queries** pane

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features.

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/eAayYDF9QzY>

**NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## February 2016 Update (2.32.4307.362)

You can now [download the latest version of Power BI Desktop](#).

We're leaping ahead with more updates this month! February brings 29 days to the month (it's a leap year), and with it, 29 improvements to this monthly update of Power BI Desktop. The following enhancements are new to Power BI Desktop this month:

### **Report View:**

- See Data Behind a Visual (including *Export Data to CSV*)
- Map improvements - plot map with latitude/longitude only
- KPI consumption release support (including navigation hierarchy support and KPI trend for SSAS MD)
- SSAS Exploration Mode: Support for **Display** folders in the **Fields** pane
- Ribbon layout improvements: Contextual ribbon tab for **Report Tools**
- New KPI visual
- Get reports opened to the same page that was visible when they were saved
- **Edit Query** option in table context menu in the Fields pane (**Report & Data** views)
- **Duplicate Page** from the ribbon

### **Data Modeling:**

- Ability to define hierarchies
- Performance Improvement: Table & Column rename optimizations

### **Data Connectivity:**

- **DirectQuery** support for Oracle and Teradata
- **DirectQuery** support for creating Calculated Columns
- Support for publishing Analysis Services Live reports
- JSON File connector
- SQL Sentry connector
- Support for jagged CSV files
- Exchange Connector - OAuth support
- SharePoint List Connector - URL validation
- Database Connectors - ability to disable Navigation Columns in Query previews (Performance optimization)
- Web Connector - fine-grained scoping of Credentials
- **Enter Data** dialog UX enhancements
- SAP HANA - Support for single sign-on with Windows Authentication (Power BI Desktop only)
- SAP HANA - Support for **Field** labels
- Alphabetical sort of columns in **Choose Columns** builder
- Improved performance of renaming/removing/reordering columns
- Virtualized Preview in **Query Editor**

- Visual indicator for unloaded queries in **Query Editor**
- 1-click Percentage transform

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features.

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/J5gZ65Wexh4>

**NOTE**

You might also be interested in learning [what's new in the mobile apps for Power BI](#).

## January 2016 Update (2.31.4280.361)

You can now [download the latest version of Power BI Desktop](#).

Ring in the new year with another collection of improvements and enhancements to Power BI Desktop. The following enhancements are new to Power BI Desktop this month:

**Report View:**

- Add borders to a visual
- Add an image background to a visual

**Data Connectivity:**

- DirectQuery: you can now create measures when using DirectQuery mode
- You can now refresh data for individual tables from the Field List (in **Report** view and **Data** view), rather than (and in addition to) just being able to **refresh all** from the ribbon
- General Availability (GA) for SQL Server Analysis Services Multidimensional models Exploration mode (no longer a preview feature)
- Enhancements to hierarchy support
- General Availability (GA) for the SAP HANA connector (no longer a preview feature)
- Ability to append multiple tables within a single Append operation
- Option to disable data previews to download in the background (performance optimization)

**Other Improvements:**

- Support for Internet Explorer 9 (IE9) browser
- Performance improvements for report rendering, cross-highlighting, and otherwise
- Improvements to R integration in Power BI Desktop

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features.

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/ek8dwi33-24>

## December 2015 Update (2.30.4246.181)

December is a month for giving, and the Power BI team is following suit with more updates, features, and more functionality in this month's Power BI Desktop update. The following enhancements are new to Power BI Desktop this month:

**Report Authoring:**

- Formatting Pane and Ribbon:
  - Format data labels per category services
  - Change the number of decimal places shown in visuals
  - Change text size in visuals
  - Ability to lay out visuals accurately: alignment, distribute, size, position
  - Set styles across multiple visuals through **Format Painter**
  - Optimized Home ribbon layout
- Enhancements to Visualizations:
  - Visual cue for sort state in **Table** visual
  - New visual: **Stacked Area** chart
  - Smart tooltips for **Area** and **Line** charts on hover
  - Ability to create reference line/region for a **Cartesian** visual
  - Improved data labels for **Pie** and **Scatter** charts
- [R Visuals integration in Power BI Desktop \(Preview feature\)](#)
- Suggested table-to-table relationships when trying to create visuals involving two tables which are not related

#### **Data Modeling:**

- Relationships View
  - Zooming slider
  - Fit Zoom to screen
  - Reset layout
  - Ability to zoom in CTRL+(mouse selection range)

#### **Data Connectivity:**

- [SSAS Multidimensional support - hierarchies support](#)
- Stripe Connector
- Smartsheet Connector
- **Enter Data:** paste or enter data to create a table
- DirectQuery improvements: support for all data types of T-SQL and SAP HANA, resulting in performance improvements
- ODBC Connector: support for selecting User/System DSNs
- CSV Connector: ability to specify Column Delimiter in the Source dialog

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features.

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/iW5VH8ilyfE>

## November 2015 Update (2.29.4217.221)

You can now [download the latest version of Power BI Desktop](#).

Another month, another big collection of new features and improvements for Power BI Desktop. Improvements range from new data connectors to new modeling capabilities. Here are 26 new features and improvements:

#### **Report Authoring:**

- Play Axis for Scatter Chart

- Horizontal Slicers
- Slicer Selection Behaviors (single vs. multi-select)
- Control Z-order
- Background Colors for Slides
- Interactions between Visuals - Subview (tile by)
- Duplicate Pages
- Support for KPIs and Images in Tables, Matrices and Cards
- Better Tooltips on Area Charts & Line Charts
- Ability to change Text size in Cards & Tables/Matrix
- Improved tooltips and labels in Field Well and Formatting panes
- Ability to see Categories with no data
- Improved Default Sort behaviors for visuals
- Ability to control Axis Scale display units
- Visuals Refresh Optimizations when applying basic modeling operations

#### **Data Modeling:**

- Basic Automatic Date Features

#### **Data Connectivity:**

- [SSAS Multidimensional support](#)
- [SAP Hana](#)
- [R Script](#)
- DirectQuery for SQL Server, Azure SQL Database and Azure Synapse Analytics (formerly SQL Data Warehouse)
- Azure Data Lake
- Marketo

#### **Data Transformations:**

- Improved Function Invocation experience
- Option to set Credentials at Server vs. Database level
- Add Prefix/Suffix to a Text column

#### **Other Improvements:**

- New Documentation Website, now also including localized content

Want more information about these updates? Take a look at the [blog post](#), where you can get more detailed information about each of these new features.

The following video describes and shows each of these updates. You can also see the video from the blog post.

<https://www.youtube.com/embed/ErHvpkyQjSg>

## October 2015 Update (2.28.4190.122)

October brings another large collection of updates to Power BI Desktop:

#### **Report Authoring:**

- Custom Visualizations
- Insert Visual from the Ribbon
- Improved Default Sorting
- Tooltips & Data Labels on Funnel Charts
- Slicer Improvements:

- Ability to Sort items
- Ability to change Font Size
- Additional Formatting Options for Gauges
- Data Point Label layout improvements
- KPI Consumption (Preview Feature)

#### **Data Modeling:**

- Semi-Select support for DAX formulas in Data view

#### **Data Connectivity:**

- Azure Document DB connector
- Mailchimp connector
- DirectQuery for SQL Server and Azure SQL Database (Preview Feature)

#### **Data Transformations:**

- Filter by "not earliest/latest date"
- Filter by "is in previous N minutes/hours/seconds"
- Copy/Paste Queries between Power BI Desktop and Excel
- Support for Special Characters in Split Column
- Refresh Previews in Merge Queries dialog
- Monospaced font for Query Editor Preview

#### **Other Improvements:**

- Refresh Single Table (vs. All) from Report & Data Views
- Option to enable Preview features
- In-Product Ratings experience

You can view a video of all these updates, too.

<https://www.youtube.com/embed/Jbocn1ZNkxM>

For more information, [check out the blog announcement](#) that describes more details about each update.

## September 2015 Update (2.27.4163.351)

The following massive collection of 44 features has been added to this update:

#### **Report Authoring**

- Report-level filters
- Drill up/down for column and scatter charts
- New Page Size and Page View options
- Support for inserting Shapes in the Report canvas
- Fields pane improvements
  - Search Box to make it easier to find fields by name
  - "Expand/Collapse All" to improve navigation when there are multiple tables in the Fields pane
  - Field well cardinality support, drag-replace for buckets with 1 item
  - Additional Data Labels formatting options
  - Chart Cartesian Axis Improvements:
    - X-Axis label direction (horizontal / diagonal)
    - Support for Logarithmic & Linear scales for values in Y-axis
    - Display Text for hyperlinks in text boxes
    - Improvements to existing visualizations: Table, Matrix, Slicer, Scatter Chart, Single Cards, Combo

### Charts and Gauges

- Support for displaying Color Saturation values in tooltips
- Ability to resize images and apply additional formatting options

### Data Modeling

- Calculated Tables.
- Relationships view:
  - Create relationships via drag/drop between two tables in the diagram.
  - Delete relationships in relationship view by selecting and hitting the Delete key.
  - Rename/delete tables and columns
- Data view:
  - Copy Table contents to clipboard.
- Field Summarization:
  - Support for additional operations in the Fields pane: median, standard deviation, and variance
  - Default summarization: Users can now customize the default summarization operation for any given field in their model

### Data Connectivity

- Support for on-premises Spark distributions
- Support for SharePoint lists from non-English sites
- Exchange connector - Enhanced support, now allowing connections to multiple mailboxes
- Excel Workbook Connector - Automatic Column Type detection when importing .XLS files
- "Select Related Tables" option when connecting to database sources
- Enhanced Active Directory connector credentials, allowing alternate Windows Credentials
- Improved Function Invocation experience when loading functions from a data source (such as a database)
- "Import Excel Workbook Contents" feature released last month now also supports external connections to Analysis Services tabular models
- New option to "Delete All" entries in the Data Source Settings dialog
- Option to "Enable Relationship Import during Refresh operations"

### Data Transformations and Query Editor Improvements

- Copy to clipboard (available for cells/columns/tables)
- Filter date columns by earliest/latest date (dynamic filter)
- Extract min/max date/time value from a column
- Replace Values - Provision for specifying special characters
- "Detect Column Types" option to trigger type detection on demand
- "Refresh All Previews" to refresh all Query Editor previews with a single click
- Performance Improvements:
  - Choose Columns dialog: Faster user experience for dealing with wide tables
  - Auto-filter & Expand/Aggregate popups: Faster for large number of values/fields

The following video covers these features in more detail.

<https://www.youtube.com/embed/Jm44dLXdarQ>

For more information about this update, [check out the blog announcement](#) that describes more details about each update.

## August 2015 Update (2.26.4128.403)

The following features have been added to this update:

## **Overall Improvements:**

- Import Excel Power BI items (Data Model, Queries, Power View) into a new Power BI Desktop file
- HDInsight Spark connector
- Azure Synapse Analytics (formerly SQL Data Warehouse) connector
- Support for custom MDX/DAQ queries when importing data from SSAS
- Live Analysis Services Connections: ability to change the database from **Edit Queries** dialog

## **Navigator dialog improvements:**

- Resizable Navigator dialog
- Ability to multi-select items in Navigator (CTRL+click, SHIFT+click, etc.)

## **Query Editor improvements:**

- Query Group creation/deletion improvements (multi-select, etc.)
- Ability to Split Query (i.e., refactor common base steps into a new query)
- Query Icons to reflect type of query in Queries navigator pane

## **Data Modeling improvements:**

- Resizing of columns in Data View
- Moving Measures from one table to another

Take a look at the following video for more details about this update:

<https://www.youtube.com/embed/2v7LUD7MJaw>

## **July 2015 Update (2.25.4095.554)**

The following features have been added in this update:

- **New Data Connectors:** appFigures, Quickbooks Online, Zendesk, GitHub, Twilio, and SweetIQ.
- **New Transformations:** Extract First/Last/Range of characters from a Text Column; Option to specify Join Type in the Merge Queries dialog; Ability to customize Quote Style in Split Column by Delimiter dialog.
- **Report Authoring Improvements:** New visualizations (Area Chart, Waterfall, Donut & Matrix); New visual formatting and customization options (labels, titles, background, legend, colors, etc.); Insert Textbox and Picture in your report; Support for hyperlinks in reports and report tables; Undo/Redo actions.
- **Direct Report Exploration** over Analysis Services Tabular Models.
- **Data Modeling:** New Data View & Relationships views.
- Publish reports to PowerBI.com, directly from Power BI Desktop.
- Support for opening Recent Files in Start Page and "File -> Open" menu.
- Support for Exchange UPN Credentials in the Exchange connector.

In addition to all these new features, we're also making **Power BI Desktop available in 42 different languages**. Get the full list of languages and install the one you want from [our official download page](#).

Take a look at the following video for more details:

<https://www.youtube.com/embed/JCaCcdMnsyM>

## May 2015 Update (2.23.4036.161)

The following features have been added in this update:

### Modeling Features

- Calculated Columns
- Data Categorization
- Sort By Another Column
- Improved DAX Formula Editor: Function Help and Prototype

### Get Data & Query

- New **ODBC Tables** connector (Beta)
- Improved to the **Excel Workbook** connector: better column type inference and faster load for data previews
- New Text Column Filters - **Does Not Begin With** and **Does Not End With**
- Enhanced Privacy Levels dialog

Take a look at the following video for details:

<https://www.youtube.com/embed/LS0zMfup1pQ>

## April 2015 Update (2.22.4009.122)

You can now [download the latest version of Power BI Desktop](#).

The following features have been added in this update:

### Modeling Features

- Initial support for DAX Measures
- New DAX functions
- Data Types & Formatting options in Report view
- Rename & Delete fields in Report view

### Get Data & Query

- OData V4 support
- Support for Custom ADFS Authentication Services
- Updated Facebook connector due to Facebook API changes
- Unified Options dialog
- Option to disable Native Database query prompts
- Support for **Fixed Decimal Number** type
- Alternate Windows Credentials
- Remove Blank Rows

- Median Operation available for Group By and Aggregate Column
- Convert **DateTimeZone** value to Local Time

### Performance Improvements

- Faster load of medium & large datasets by about 20%
- Improved time to open an existing PBIX file by about 50%

You can watch the following video for details:

<https://www.youtube.com/embed/FuL8agVKrcg>

## March 2015 Update (2.21.3975.261)

The following features have been added in this update:

- Google Analytics connector
- Additional operators for **date filtering in Query view**
- Automatic Model Relationship Detection
- Enhanced **Add Relationship** dialog
- Report Pages Re-ordering (drag & drop)
- ~40-50% **Performance Improvement** filling database tables without filters/transforms
- Lots of bug fixes

You can watch the following video for more details:

<https://www.youtube.com/embed/xJTcGro08Tl>

## February 2015 Update (2.20.3945.102)

The following features have been added or improved in this update:

- Performance improvements
- Dynamics CRM Online connector

#### NOTE

Currently, only URLs within the [crm.microsoft.com](http://crm.microsoft.com) domain are accepted by this dialog. This does not include non-production tenants. We'll fix this issue in our March update. The temporary workaround is to connect to this feed using "From OData".\*

- Navigator Dialog improvements
  - Better preview experience for multi-dimensional sources (Analysis Services and SAP BusinessObjects)
  - Show Selected Items option
  - Improved Search capabilities in the Navigator tree
- New Transformations
  - Age and Subtract operations for Date/Time columns
  - Aggregate Columns: Option to disable new columns' prefix
- Field List improvements
  - Expand/Collapse tables

- Hide/Unhide fields
- Optimized layout (spacing, margins, and fonts)
- Report Pages Navigation - Key boarding support
- Lots of bug fixes

<https://www.youtube.com/embed/-bZFeS1S1wU>

#### **January 2015 Update (2.19.3923.101)**

This month we've made a number of improvements and bug fixes under the covers. Please try out the new version and continue to send us feedback if you find any issues!

# Change log for Power BI Desktop

12/15/2022 • 11 minutes to read • [Edit Online](#)

This change log is for Power BI Desktop and lists new items along with bug fixes for each released QFE build.

See [What's new in Power BI](#) for more information about new features.

## October 2022 QFE 2

*Version: 2.110.1161.0, Released: November 7, 2022*

Bug fixes/improvements:

- Fix for modeling regression: customers can now rename fields in tables created using DAX expressions, such as Calendar functions and Field parameter tables.

## October 2022 QFE 1

*Version: 2.110.1085.0, Released: November 3, 2022*

Bug fixes/improvements:

- Fix for Formula bar in model view: customers won't get an error message when deleting a table with selected DAX expression in Formula bar.
- Fix for Formula bar in model view: customers can now edit DAX expression that contain special Japanese symbols.
- Fix for Proxy models regression: customers can now rename fields after converting Live connect model to a local model.

## September 2022 QFE 3

*Version: 2.109.1021.0, Released: October 4, 2022*

Bug fixes/improvements:

- Performance regression fix: customers will now see faster performance when they open and save .pbix files that have a large number of queries.

## September 2022 QFE 2

*Version: 2.109.844.0, Released: September 28, 2022*

Bug fixes/improvements:

- Horizontal Fusion improvement: now covers more query patterns, including patterns that rely on "TreatAs" to filter results.

## September 2022 QFE 1

*Version: 2.109.782.0, Released: September 20, 2022*

Bug fixes/improvements:

- Fix for Card visual: users can now set and modify the conditional formatting options to callout value color.

- Fix for charts with multiple series: conditional formatting will now correctly apply multiple colors to data labels.

## August 2022 QFE 2

*Version: 2.108.997.0, Released: August 25, 2022*

Bug fixes/improvements:

- Fix for OAuth token refresh for certain data sources like Synapse.
- Fix for live connections to AS models that have columns or measures included in more than one nested display folder.
- Data view regression fix: now list of filters in context menu will be displayed even when menu icons are not in focus.
- EvaluateAndLog DAX function fix: now the function will work as expected and won't return an error.
- SAP HANA regression fixes: now power query won't show "the index is outside the bounds of the records" error message and there won't be missing values for columns when using Cube.AttributeMemberID on the query.
- Rollback change for cashing: cashing will be done the same way as in previous releases
- Formula bar fixes for cases when "Shift+Enter" is used.
- "Apply/discard changes" regression fix.

## August 2022 QFE 1

*Version: 2.108.825.0, Released: August 18, 2022*

Bug fixes/improvements:

- Fix for PBIX open file issue when connecting to Proxy models.
- Data view filtering regression fix: now when filtering wide tables by selecting one column and scrolling to select one more column, the filtering/scrolling will work, and user will be able to select a column at the end of a wide table.
- Data view regression fix: date and number filter options will be available in the right-click menu.
- Formula bar fixes for cases when "Shift+Enter" is used.
- "Apply/discard changes" regression fix.

## July 2022 QFE 1

*Version: 2.107.841.0, Released: July 21, 2022*

Bug fixes/improvements:

- Fix for SAP BW: now customers will be able to retrieve a full dataset when querying SAP BW and using paging operations (Table.skip, Table.FirstN etc) even if the data exceeds the page size.
- Fix for SAP HANA: now when creating new connections or refreshing data, a display name will be shown instead of a technical column name in the fields well.

## June 2022 QFE 1

*Version: 2.106.883.0, Released: June 28, 2022*

Bug fixes/improvements:

- Fix for the start-up Sign-In ThreadStateException: now the logic for the sign-in process is split into two separate steps (users attempt to sign-in using cached credentials in the background as the first step, and then

if needed they are returned back to the UI thread for the second step, that previously caused the ThreadStateException, and sign in with platform credentials).

- Fix for the legend color: now it will be the same for PBI Desktop and PBI Service.
- Fix for broken export 'data to file' content from custom visuals.
- Fix for custom visuals using API above 4.4: definition for 4.5 and 4.6 custom visual API versions was added, and these custom visuals now run as expected.

## May 2022 QFE 2

*Version: 2.105.1143.0, Released: June 3, 2022*

Bug fixes/improvements:

- Fix for the Azure Active Directory authentication issue on WebView2: now users will be able to authenticate and connect to all MS AAD resources.
- Assert failure fix for column names longer than 30 characters: now users will be able to connect to tables with columns names longer than 30 characters and refresh them.

## May 2022 QFE 1

*Version: 2.105.923.0, Released: May 23, 2022*

Bug fixes/improvements:

- Datamarts data sources fix: primary keys are now supported.
- Axis scale setting persistence fix through version updates for category axis for scatter, line, stacked area, area and combo charts: now the setting for categorical axis with a log axis will persist.

## April 2022 QFE 1

*Version: 2.104.941.0, Released: April 26, 2022*

Bug fixes/improvements:

- Fix for DAX expressions: the DAX parsing process in the formula bar now runs faster and the application does not hang.
- Fix for DirectQuery connections in Shared: it's now possible to add a DirectQuery connection to an existing report.
- Fix for the format pane of bar charts: X-axis and Y-axis field well names are now mapped correctly and only their names are displayed.
- Fix for stacked column charts with logarithmic scale: users can now apply Y axis log scale even if the legend field is present.
- Fix for the condition used to test disabled date bounds in calendar: users can now select last date in the calendar popup.

## March 2022 QFE 1

*Version: 2.103.881.0, Released: March 28, 2022*

Bug fixes/improvements:

- Fix for the new format pane of matrix visuals: now the URL icon on rows/columns & horizontal scroll bar will work.
- Date picker defaults fix: now for the existing reports the datepicker icon in date range slicers will not be available and as a result, users' reports will not be changed.

- Model refresh fix: now column descriptions for SimpleQueryMappingInput table inputs will not disappear after the model refresh.
- AS engine fix: now the `language` in the AS config file will always be set to en-us regardless of the Power BI Desktop UI language to prevent issues with the AS engine's start.
- Keyboard Navigation fix for the selection pane: now it will be accessible by keyboard while navigation define under "Format" tab.

## February 2022 QFE 1

*Version: 2.102.845.0, Released: February 24, 2022*

Bug fixes/improvements:

- Dynamics 365 (Dataverse) entry in GetData which redirects to Dataverse connector is removed from the GetData list.
- Fix for the conditional formatting regression: conditional formatting for action > page navigation will work.
- Fix for fields well description: a multiline field's tooltip will not be cut off and will be fully visible.
- Mashup engine fix: headers will be requested just once when accessing headers on paged HTTP values.
- Fix for a DirectQuery connection to a dataset in workspace with a '/' in the name.
- Fix for perspective selection in the proxy models navigator.

## December 2021 QFE 3

*Version: 2.100.1401.0, Released: January 20, 2022*

Bug fixes/improvements:

- Fix for creating hybrid incremental refresh policies on DirectQuery over M queries: now users will be able to create a hybrid incremental refresh policy for the import tables that use DirectQuery over M.
- Fix for the "Power BI Desktop infrastructure update" preview feature: now when the feature is on, Quick measure dropdown dialog will not gray out and will work as expected.
- Fix for Proxy models: now when adding new table on the proxy source relationship with `IncludeFutureArtifacts = false`, the relationship to the original table will be created and proxy model will be refreshed.

## December 2021 QFE 2

*Version: 2.100.1182.0, Released: January 10, 2022*

Bug fixes/improvements:

- Fix for the drop action: now no exception/error message will appear when dragging and dropping into a drill-through bucket.
- AS engine start telemetry fix: Power BI application and the corresponding AS engine process should start successfully after locking/unlocking the screen.

## December 2021 QFE 1

*Version: 2.100.785.0, Released: December 21, 2021*

Bug fixes/improvements:

- Fix for calculation groups: duplicated measures will not be shown in the field list for PBIX files with calculation groups.
- Accessibility fixes for hierarchical slicer.

## November 2021 QFE 2

*Version: 2.99.862.0, Released: November 30, 2021*

Bug fixes/improvements:

- Fix for ArcGIS Maps visual sign-in issue: now the sign-in window for the visual will pop-up (when "Power BI Desktop infrastructure update" preview feature is off).

## November 2021 QFE 1

*Version: 2.99.782.0, Released: November 23, 2021*

Bug fixes/improvements:

- Fix for Custom Visuals Store: now if a user isn't connected to the internet, they can still close the marketplace window.
- Fix for Print to PDF: now works for users that have the WebView2 feature turned off and don't have the new version of WebView2 installed.

## October 2021 QFE 3

*Version: 2.98.1025.0, Released: November 3, 2021*

Bug fixes/improvements:

- Formula bar Intellisense fix: now it's possible to save DAX expressions in localized format and use localized DAX separators.

## October 2021 QFE 2

*Version: 2.98.1004.0, Released: October 28, 2021*

Bug fixes/improvements:

- Fix for the progress dialog: now Import/Refresh progress bar will be shown as expected.
- Formula bar fixes:
  - "best" available list will be shown as the suggestion list;
  - the parameter hints intellisense widget will cover function contents for multi-line measures;
  - DAX intellisense service is updated to set the right UI culture and respect localized DAX separate options;
  - the parameter hints will be shown when a suggestion is accepted;
  - error won't be thrown for table names that start with """;
  - few icons are added to the suggestions list to make the suggestion clear and avoid confusion;
  - missing function parameter information is added for some DAX functions and now intellisense works for them;
  - the latest icon files will be shown for variable and enum formula bar icons.

## October 2021 QFE 1

*Version: 2.98.882.0, Released: October 22, 2021*

Bug fixes/improvements:

- Fix for proxy tables: now when a proxy table is deleted there will be no visible LocalDateTable left.
- Fix for the issue where opening a PBIX file with saved diagram layouts would not properly restore those

layouts in the model view.

## September 2021 QFE 2

*Version: 2.97.921.0, Released: September 28, 2021*

Bug fixes/improvements:

- Fix for proxy schema sync ordering issue: now when changing data source, refresh won't fail due to resolvable relationship ambiguity.

## September 2021 QFE 1

*Version: 2.97.861.0, Released: September 24, 2021*

Bug fixes/improvements:

- Azure Analysis Services fix: now when connecting to AAS and proxy detection is required, the connection will succeed.

## August 2021 QFE 2

*Version: 2.96.1061.0, Released: August 30, 2021*

Bug fixes/improvements:

- Fix for custom visuals: now there will be no crash if a managed organizational store custom visual doesn't appear in the app source.

## August 2021 QFE 1

*Version: 2.96.901.0, Released: August 23, 2021*

Bug fixes/improvements:

- Fix to hide Business apps launch event ad.
- Fix for Query Editor: now 'Enable load' will work after the query was renamed.

## July 2021 QFE 1

*Version: 2.95.983.0, Released: July 29, 2021*

Bug fixes/improvements:

- Fix for script visuals: now they can be enabled.
- Fix for SAP BW reports: now tables are not duplicated if click refresh.
- Fix for Enhanced-Tooltips: now tooltips stick long enough for users to interact with the drill buttons in the tooltip.

## June 2021 QFE 1

*Version: 2.94.921.0, Released: June 29, 2021*

Bug fixes/improvements:

- Fix for Google Auth: Google Auth is moved to System Browser (non-embedded) to allow users to sign in to Google Analytics and Google Big Query.
- Fix for FinalNameCalculator that treated measure names as case sensitive: now when looking for measure

name conflicts case will be ignored.

- Fix for Q&A visual: now visual column renames are recognized as synonyms.

## May 2021 QFE 1

*Version: 2.93.981.0, Released: May 27, 2021*

Bug fixes/improvements:

- Registry settings improvement: now registry settings are applied according to the [Desktop evaluation configuration](#) article and impact evaluations are done in the Analysis Services process (msmdsrv.exe) as well as the Power BI Desktop process (PBIDesktop.exe).

## April 2021 QFE 2

*Version: 2.92.1067.0, Released: May 4, 2021*

Bug fixes/improvements:

- Fix for Adobe Analytics Connector V1 endpoint token not renewed issue.
- Fix for a frown error that could occur in the model view while loading older PBIX files: now no frown dialog will be shown.
- Fix for a model view bug: now users can't create relationships between DirectQuery tables from the same Power BI dataset or Azure Analysis Services instance as this scenario isn't supported.

## April 2021 QFE 1

*Version: 2.92.943.0, Released: April 27, 2021*

Bug fixes/improvements:

- Improvements in Microsoft Information Protection SDK detection of the machine stopping to respond and stop throwing "Unknown hard error" dialog.
- Fix for corrupted credentials: users will not get the alert warning that their credentials can't be decrypted, now users may consider manually removing credentials folder (user.zip file) as a workaround.

## March 2021 QFE 1

*Version: 2.91.884.0, Released: March 29, 2021*

Bug fixes:

- Fix where the Microsoft Information Protection SDK stops responding during evaluation shutdown.
- Amazon Redshift driver update to fix the issue with non-nullable primary key columns being treated as empty strings after merge queries.
- Fix for slicers to contain unique (non-duplicated) values when using aggregations.
- Fix for formula bar: prevent UI interactions when empty measures, calculated columns, calculated tables are deleted from the model.
- Fix for PBI.FormatAnnotationStats telemetry event.
- Fix for customized fields display folders: now the folders won't disappear after data refresh or **Choose Columns** changes in Power Query.
- ODBC drivers update to newer versions.
- Fix for Microsoft Purview Information Protection timeout issues: now when a user opens a file or signs in and faces network issues, MIP exception won't pop up.

# February 2021 QFE 1

*Version: 2.90.1081.0, Released: March 8, 2021*

Bug fixes:

- Fix for Azure Analysis Services OAuth token refresh.
- Fix for Power Query model import from Excel to Power BI Desktop.
- Fix for combo chart with dynamic format strings, series, categories, column values, and line values.
- Fix for Power BI Desktop save validation: now it doesn't overwrite the customer's previous file with an invalid .pbix file, if it's caused by Analysis Services writing to the zip file.
- Fix for Model view large .pbix files: now it will not throw an error when you quickly switch to model view.
- Fix for Model view blurry fields and icon text inside a table card.
- Fix for Color picker: now it closes when you press ESC.

## Next steps

[What's new in Power BI](#) [Previous monthly updates to Power BI](#)

More questions? [Try asking the Power BI Community](#)

# Power BI Desktop Send a Smile Privacy Statement

12/15/2022 • 3 minutes to read • [Edit Online](#)

Error reporting uses the Windows Error Reporting platform rather than the *Send a Smile* or *Send a Frown* functionality. You can get more information about the Windows Error Reporting platform in the [Windows Privacy blog](#).

## For versions of Power BI Desktop prior to March 2018

At Microsoft, we are working hard to protect your privacy, while delivering products that bring you the performance, power, and convenience you want. This Privacy Statement explains many of the data collection and use practices of Microsoft Power BI Desktop Feedback *Send a Smile*. It doesn't apply to other online or offline Microsoft sites, products, or services.

Except as otherwise described in this statement, *Send a Smile* doesn't send personal information to Microsoft. Information that is sent to Microsoft isn't shared outside of Microsoft and its controlled subsidiaries and affiliates without your permission.

*Send a Smile* to Power BI Desktop allows you to send an email address with your feedback. This email address is used to contact you if Microsoft needs further information or clarification on your request. You don't have to register your email address with Microsoft to use *Send a Smile*.

*Send a Smile* to Power BI Desktop allows you to send feedback to Microsoft and, if you want, include screenshots showing the specific compliment or concern you have. Although *Send a Smile* doesn't intentionally collect personally identifiable information, it is possible that such information might be captured in the feedback or screenshots you provide. Microsoft doesn't use this information to identify you.

*Send a Smile* automatically collects some information about your system configuration, standard computer information, and basic information about how you use Microsoft products. This information is sent when you choose to send feedback.

*Send a Smile* generally collects information about:

- System configuration, such as the operating system version and architecture that you use (32-bit vs. 64-bit).
- Standard computer information, such as the Power BI Desktop, Internet Explorer version and CLR version that you are using.
- Power BI Desktop program usage, such as File Package Info (Document Locale, Fast Combine Enabled/Disabled state), Enabled and Disabled Preview Features, DirectQuery vs. Import mode, current Working Set and Peak Virtual Memory used in the current session.

The personal information we collect from you is used by Microsoft and its controlled subsidiaries and affiliates to provide the services or carry out the transactions you requested or authorized, and it might also be used to request additional information on:

- Feedback you provide about the product or service you are using
- To provide critical updates and notifications regarding the software
- To improve the product or service, for example, bug and survey form inquiries

Except as described in this statement, personal information you provide isn't transferred to third parties without your consent. We occasionally hire other companies to provide limited services on our behalf, such as:

- Packaging, sending and delivering purchases, and other mailings

- Answering customer questions about products or services
- Processing event registration
- Performing statistical analysis of our services

We only provide those companies with the personal information they need to deliver the service, and they are prohibited from using that information for any other purpose.

Microsoft might access or disclose information about you, including the content of your communications, to:

- Comply with the law or respond to lawful requests or legal process
- Protect the rights or property of Microsoft or our customers, including the enforcement of our agreements or policies governing your use of the services
- Act on a good faith belief that such access or disclosure is necessary to protect the personal safety of Microsoft employees, customers, or the public

Information collected by or sent to Microsoft by *Send a Smile* might be stored and processed in the United States or any other country in which Microsoft or its affiliates, subsidiaries, or service providers maintain facilities. Microsoft abides by the Safe Harbor Framework as set forth by the United States Department of Commerce regarding the collection, use, and retention of data from the European Union.

## Security of your information

Microsoft is committed to helping protect the security of your personal information. We use a variety of security technologies and procedures to help protect your personal information from unauthorized access, use, or disclosure.

## Changes to this Privacy Statement

Microsoft might occasionally update this Privacy Statement. The last updated date at the top of the Privacy Statement is updated with every revision. We encourage you to periodically review this Privacy Statement to be informed of how Microsoft is helping to protect your information.

# Power BI Desktop diagnostics collection

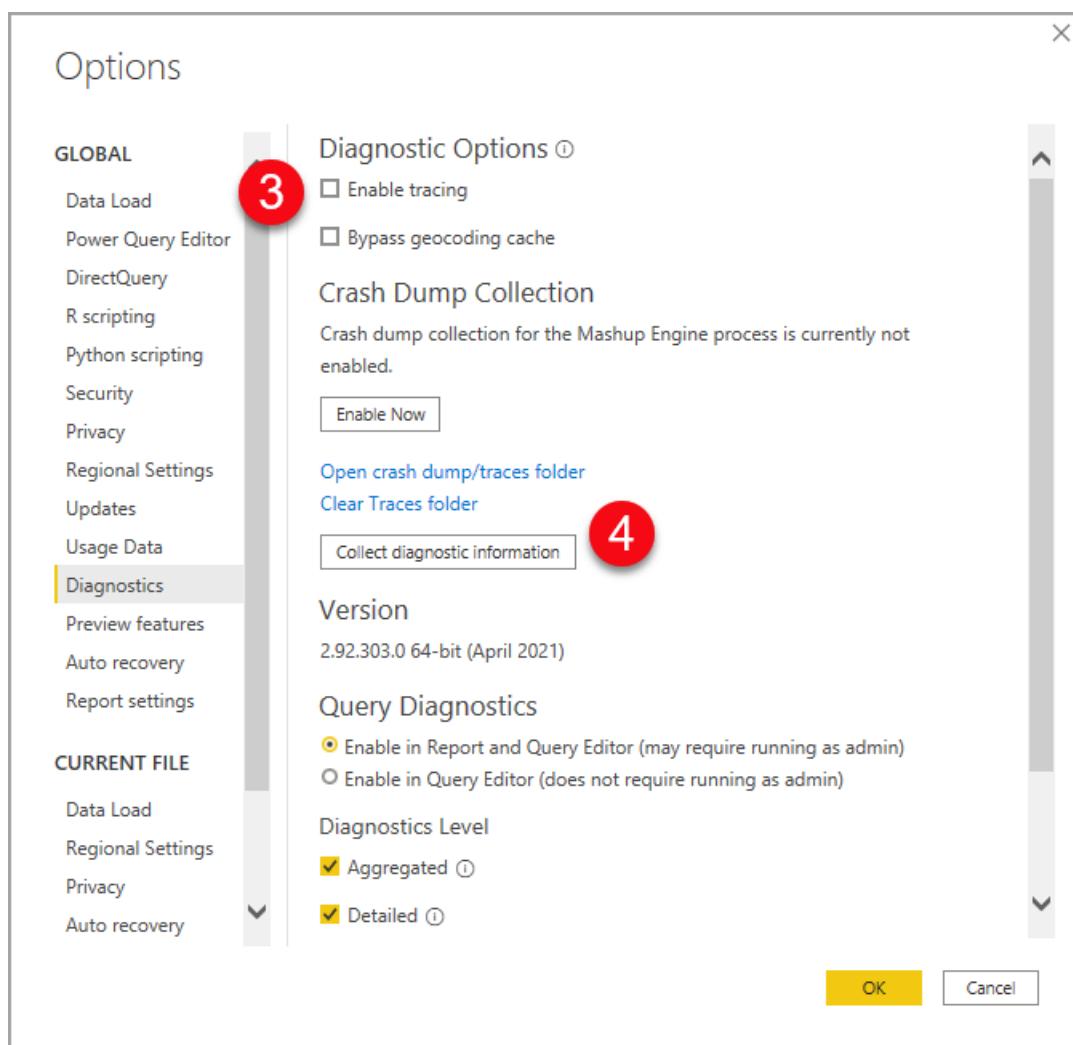
12/15/2022 • 4 minutes to read • [Edit Online](#)

To provide better supportability and diagnostics, Power BI Desktop can collect and submit diagnostics information. The process of collecting and sending Power BI diagnostics information has been simplified, and is easy to use. You should only save diagnostics details when instructed to do so by Microsoft Support. Power BI Desktop diagnostics can be collected beginning with the April 2021 release of Power BI Desktop.

## How to save diagnostics details in Power BI Desktop

To save diagnostics information in Power BI Desktop, follow these steps:

1. In Power BI Desktop, select **File > Options and settings > Options**
2. Under **Global**, select **Diagnostics**
3. Select **Enable tracing**
4. Select **Collect diagnostic information**.



5. When you select **Collect diagnostic information**, the following dialog appears:

## Save diagnostics details

We've collected basic information about this problem, but more would help us resolve it. To capture diagnostic details to send us later, review the information below. Keep in mind, the details may contain personally identifiable or confidential information.

We'll collect information about:

- Performance of your data model [Learn more](#)
- Session and device information [Learn more](#)
- Details about the error that occurred [Learn more](#)
- Structure of your data model [Learn more](#)
- Data refresh settings [Learn more](#)

Choose where to save these diagnostics details. Then review and share them with Microsoft to get appropriate support.

 [Browse](#)

[Save](#) [Cancel](#)

Review the information provided in the dialog. To learn more about the information collected, see the [Diagnostic information collected](#) section in this article.

By default, the diagnostic details are saved in your **Documents** folder. Select the **Browse** button to navigate to and select another location.

When satisfied with where Power BI Desktop should save the diagnostic information, select **Save** to save the diagnostic details and close the dialog. Your diagnostic details are stored in a **PBIDesktopDiagnosticInfo.[timestamp].zip** file in the location you specified.

The diagnostics ZIP file may contain the following files and directories, based on what happened on your machine and on your settings:

- **ErrorsInfo.yaml** - contains [details about the error that occurred](#) and gets created only if an error dialog was shown.
- **PackagingErrorsInfo.yaml** - contains information about errors that have occurred while collecting the telemetry (if any).
- **AnalysisServicesInfo.trc** - contains information [about the performance of your data model](#).
- **SessionDeviceInfo.txt** - contains [session and device information](#).
- **AutoPageRefresh.json** - contains [the data refresh settings](#).
- **CSDL.xml** - describes the [structure of the data model](#).
- **DataModelSchema.json** - describes the [structure of the data model](#).
- **Traces/ folder and files** - contains additional [session and device information](#).
- **QuerySchemas/ folder and files** - contains query information and data model structure for remote models.

Name	Type	Compressed size	Passw...
Traces	File folder		
AnalysisServicesInfo.trc	SQL Server Profiler - trace dat...	17 KB	No
CSDL.xml	XML Document	3 KB	No
DataModelSchema.json	JSON File	3 KB	No
SensitiveErrorDetails.txt	Text Document	1 KB	No

If requested by Microsoft support, send the compressed folder (the zip file) containing the diagnostic details to Microsoft.

The following video shows the diagnostics collection process:

## Diagnostic information collected

The diagnostic information collected is comprehensive and covers the information most commonly required to solve issues. Power BI Desktop collects information about:

- the performance of your data model
- the current Power BI Desktop session and your device
- the error that occurred
- structure of your data model
- data refresh settings

The following sections provide more detail about the information collected.

### Performance of your data model

The data model performance information helps us analyze the interaction between the Power BI engine and data sources. It's especially relevant in situations where you are experiencing:

- issues with model performance
- DirectQuery issues
- Aggregation issues

The following information is included:

- The locale of your Power BI Desktop environment
- Power BI Desktop version
- The path where the currently open PBIX and data model are stored on your machine
- Whether your data model is in import, DirectQuery or a mixed mode
- Any queries created to generate visuals, including table, column, measure names and data values if used as a filter

### Session and device information

The session and device information provides insight to the complexity of the queries and features used. It includes information about:

- Operating system, including version, time zone configuration
- Hardware, including memory configuration

- Power BI Desktop version
- Power BI Desktop configuration, such as whether fast combine is enabled
- The path to where the trace logs are stored on your local machine
- Data model default mode (import, DirectQuery, or a mixed mode)
- Data model metadata version
- Which preview features are enabled / disabled
- Any DirectQuery options that are set
- The name of the cloud environment (tenant) you are logged into (if any)
- Power Query queries

Error information is especially relevant if you are experiencing:

- Issues with report and Power Query performance
- Issues where Power BI Desktop stops responding, stops unexpectedly or does not load properly

### **Details about the error that occurred**

Error information includes exactly which error occurred and where in our code it happened. It also includes a link to where the trace logs are stored on your local machine. It also includes the following:

- Data model default mode (import, DirectQuery, or a mixed mode)
- Data model metadata version
- Which preview features are enabled / disabled in Power BI Desktop
- The name of the cloud environment (tenant) you are logged into (if any)
- The recent actions you did, such as adding a field to a visual.
- Power Query queries

Error information is especially relevant if you are experiencing:

- Issues with report and Power Query performance
- Issues where Power BI Desktop stops responding, stops unexpectedly or does not load properly

### **Structure of your data model**

The information collected is a text description of everything you can see in the data model view in Power BI Desktop, including:

- Table information, including name, number of rows
- Column information, including name, data types, number of distinct values, minimum and maximum values
- Relationships, including to/from which table and column, direction, cardinality and other settings
- Calculated columns definitions
- Measure definitions
- Role definitions
- Remote source structure and query

Data model structure information is especially relevant if you are experiencing:

- Issues with model performance
- Issues with modeling in general

### **Data refresh settings**

Data refresh information helps us analyze issues with incremental refresh, aggregations, and automatic page refresh. It describes the incremental refresh settings made (including table names), any aggregations defined (including table and column names).

Data refresh information is especially relevant if you are experiencing:

- Issues with incremental and automatic page refresh
- Issues with aggregations, including performance issues.

## Next steps

You can do all sorts of things with Power BI Desktop. For more information on its capabilities, check out the following resources:

- [What is Power BI Desktop?](#)
- [Query overview with Power BI Desktop](#)
- [Data types in Power BI Desktop](#)
- [Shape and combine data with Power BI Desktop](#)
- [Common query tasks in Power BI Desktop](#)