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What is Power BI?

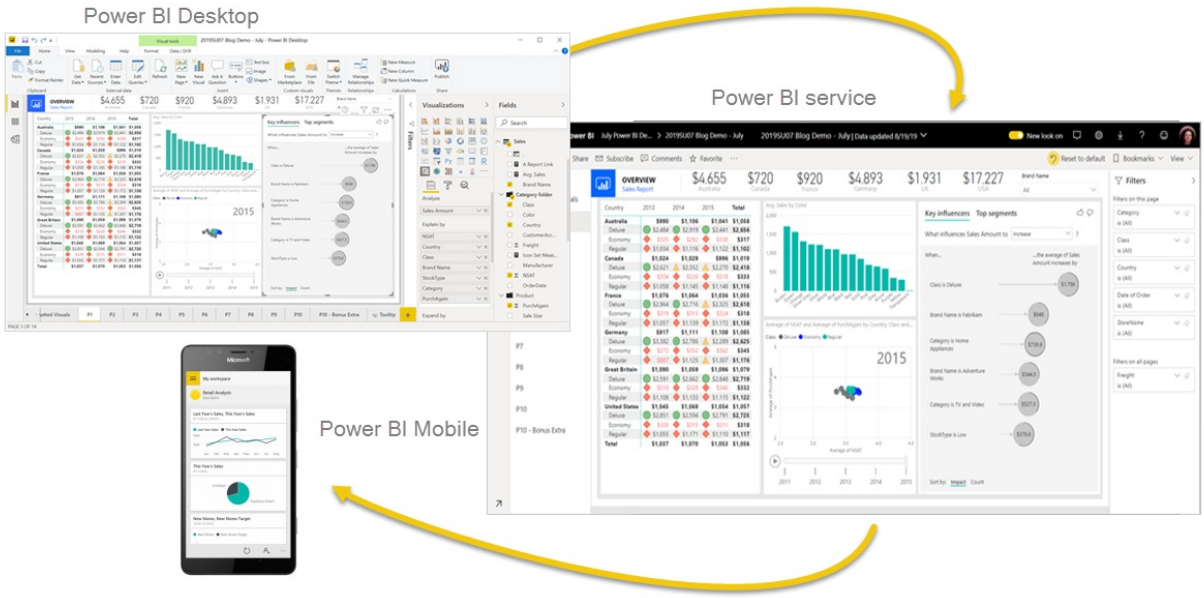
3/5/2021 • 4 minutes to read • Edit Online

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*
  - Embedded analytics with Power BI
  - What is Power BI Embedded in Azure?
  - Visuals in Power BI
  - What can developers do with the Power BI API?

The flow of work in Power BI

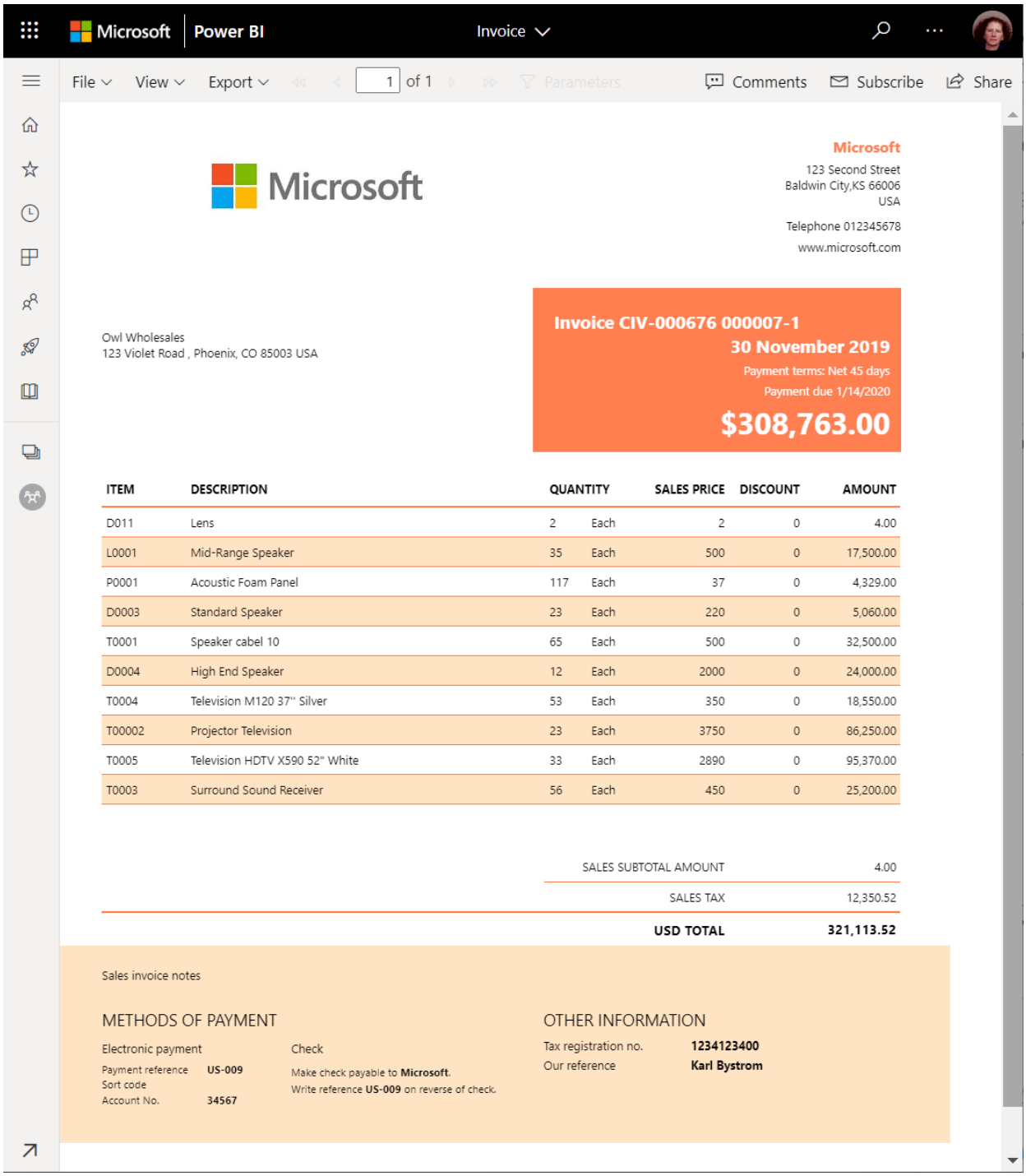
One common workflow in Power BI begins by connecting to data sources in Power BI Desktop and building a report. You then publish that report from Power BI Desktop to the Power BI service, and share it so business users in the Power BI service and on mobile devices can view and interact with the report.

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.

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.

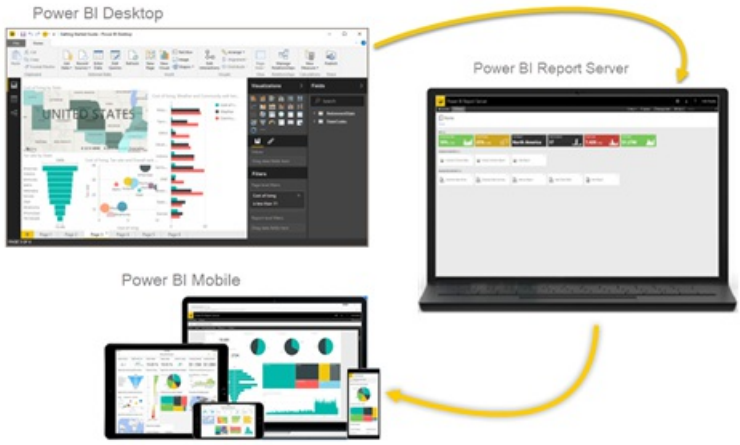


Read more about paginated reports in the Power BI service.

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.

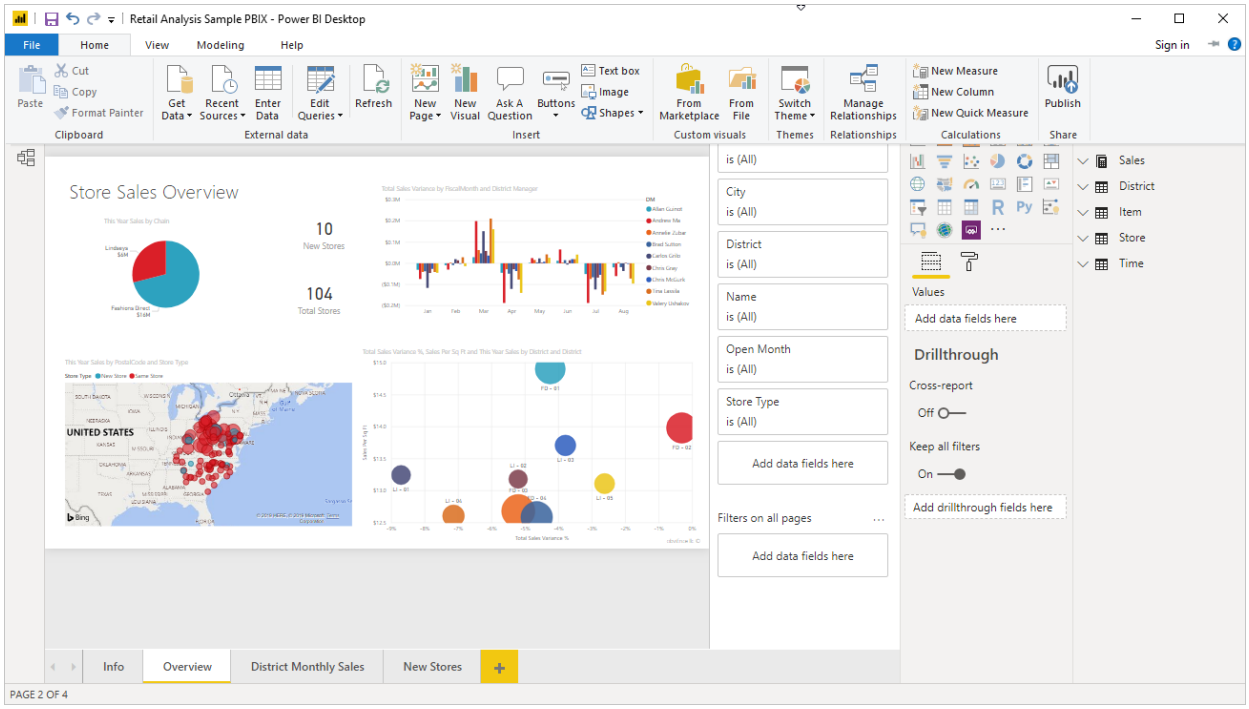
Next steps

- 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?

3/11/2021 • 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 that 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.

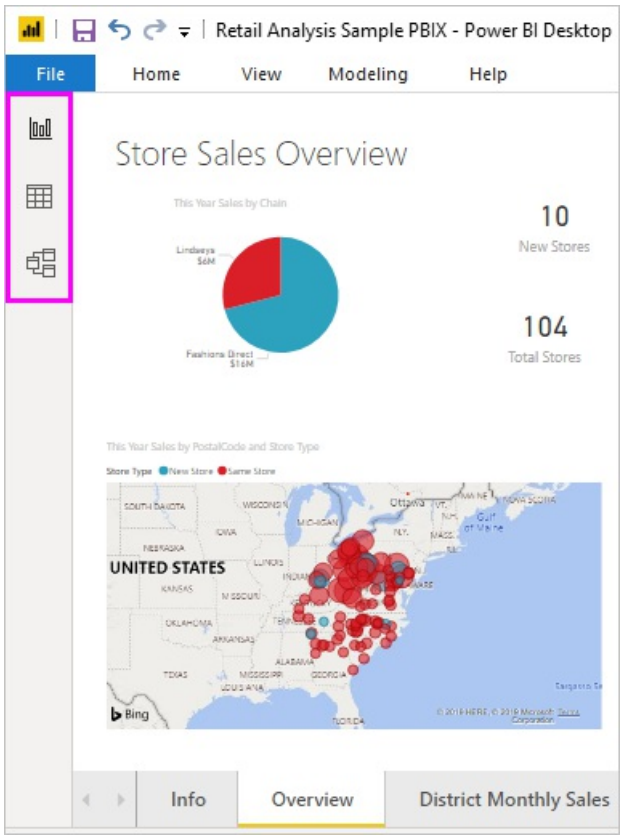
IMPORTANT

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**: In this view, you create reports and visuals, where most of your creation time is spent.
- **Data**: In this view, 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**: In this view, 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:



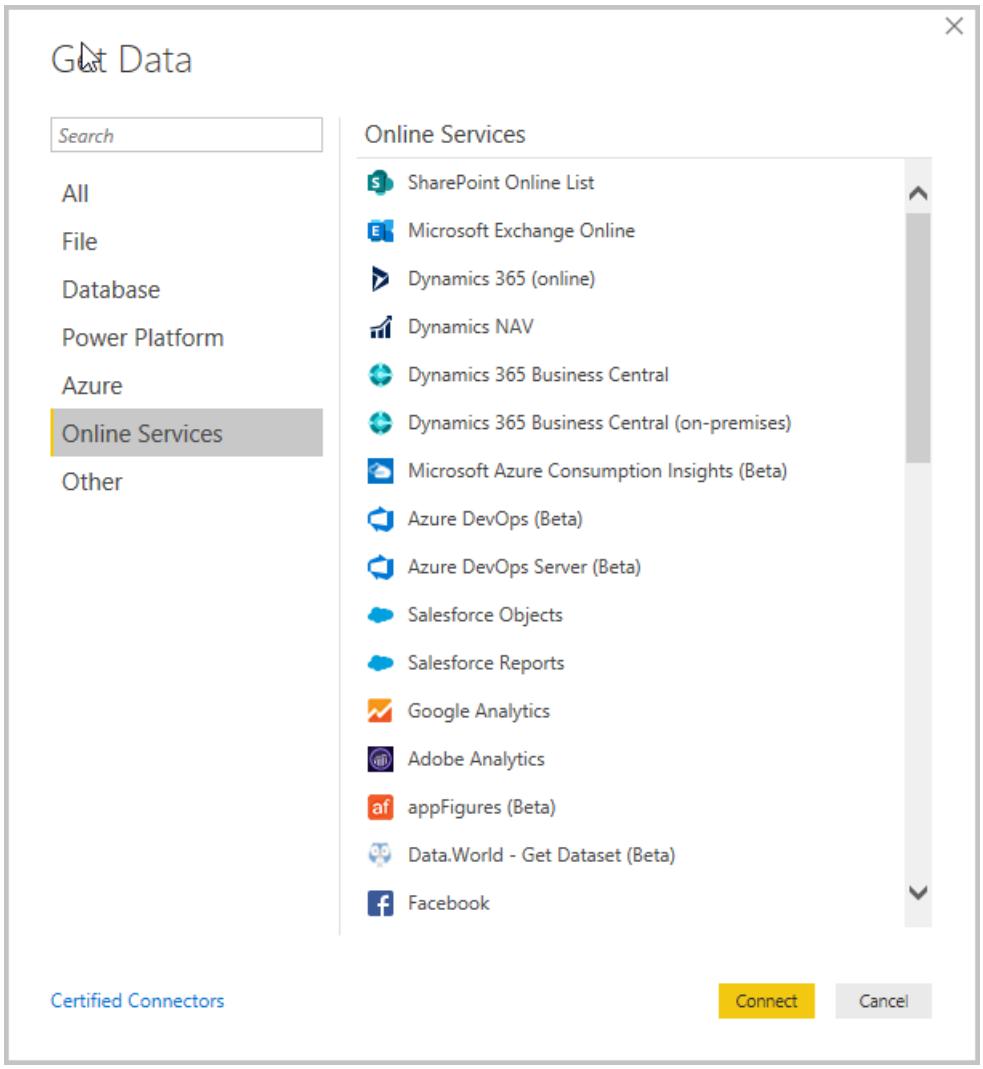
Connect to data

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.

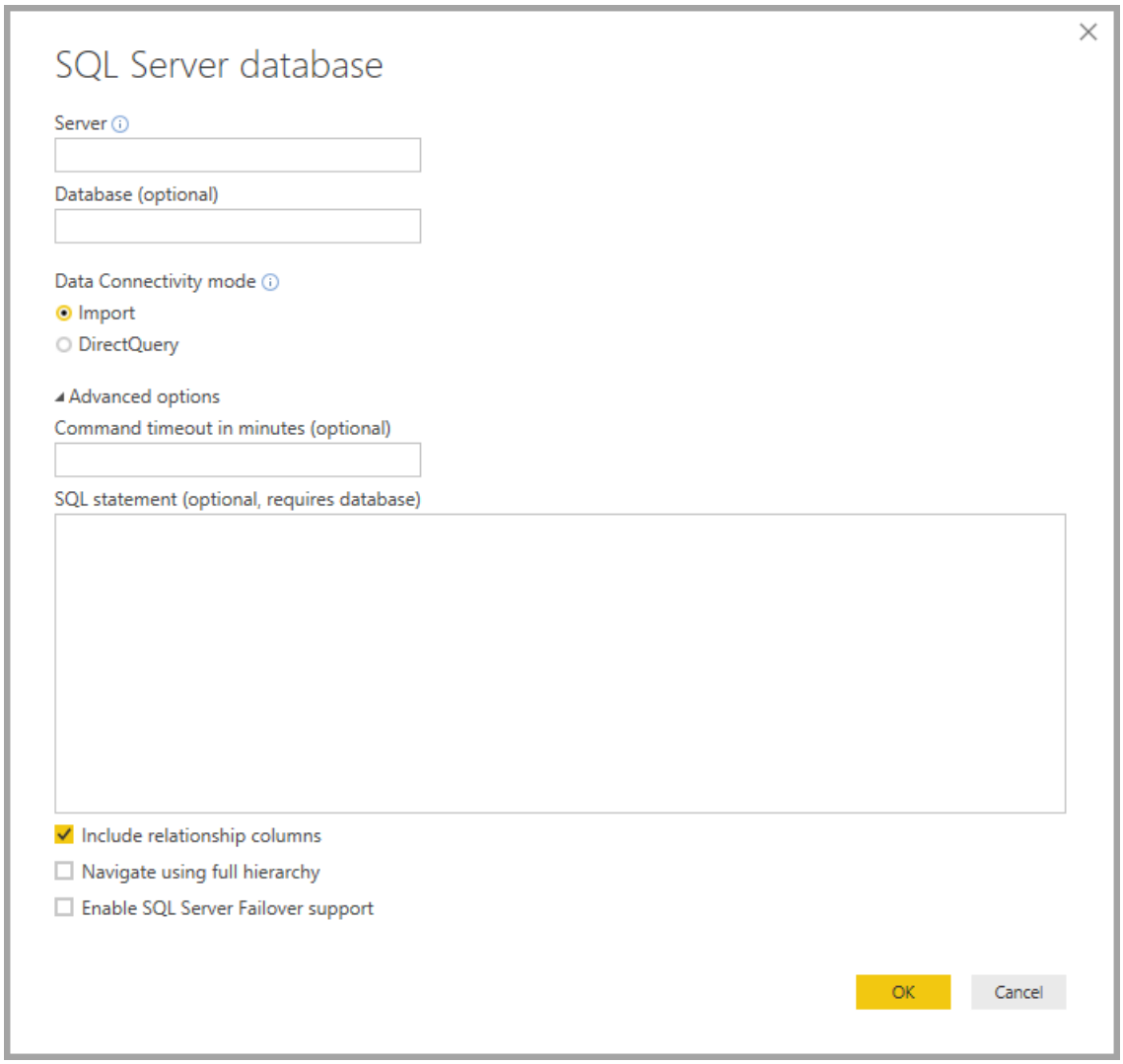
To connect to data:

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.



2. 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.

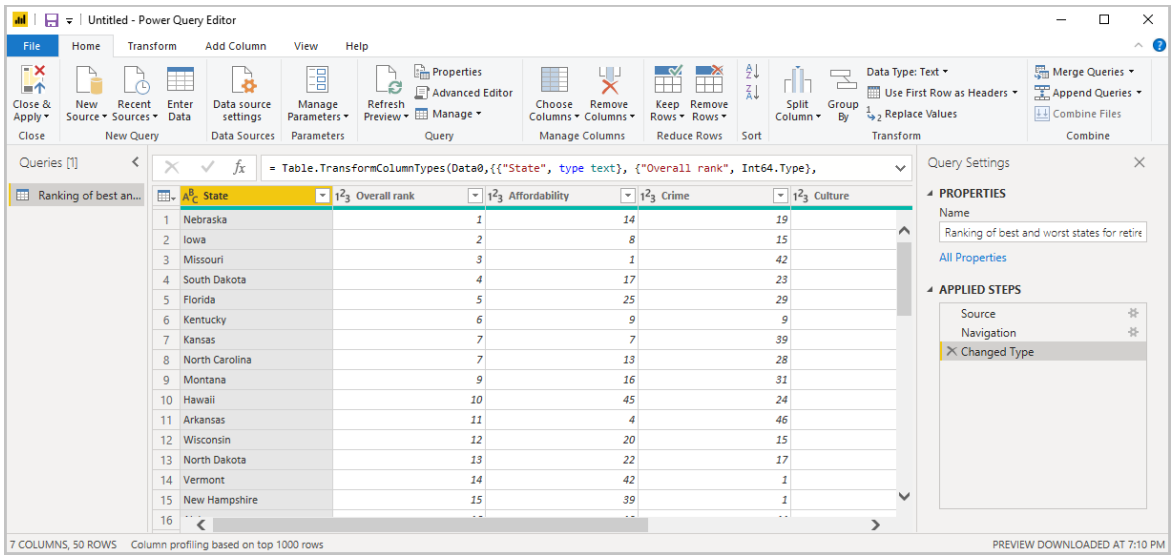
Transform and clean data, create a model

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:

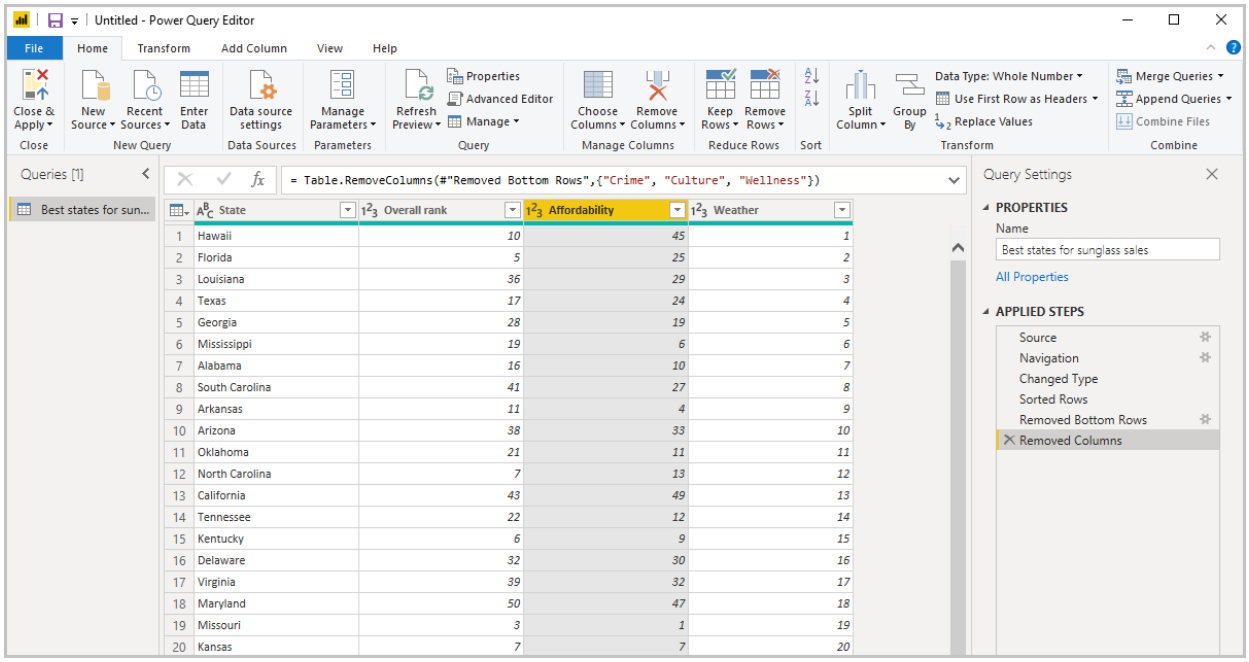
- On the **Home** ribbon, in the **Queries** section, select **Transform data**.

  The **Power Query Editor** window appears.



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.

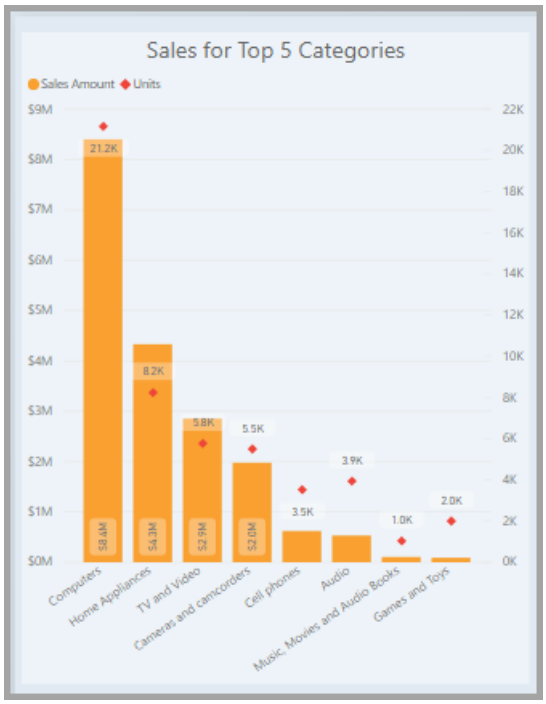
The following image shows the **Power Query Editor** window for a query that has been shaped, and turned into a model.



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

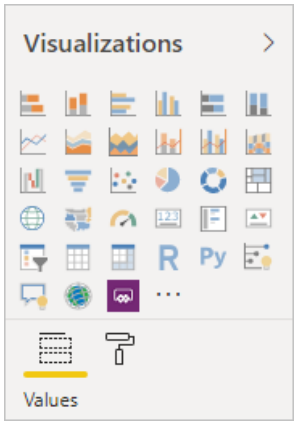
Create visuals

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 visual icon.



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

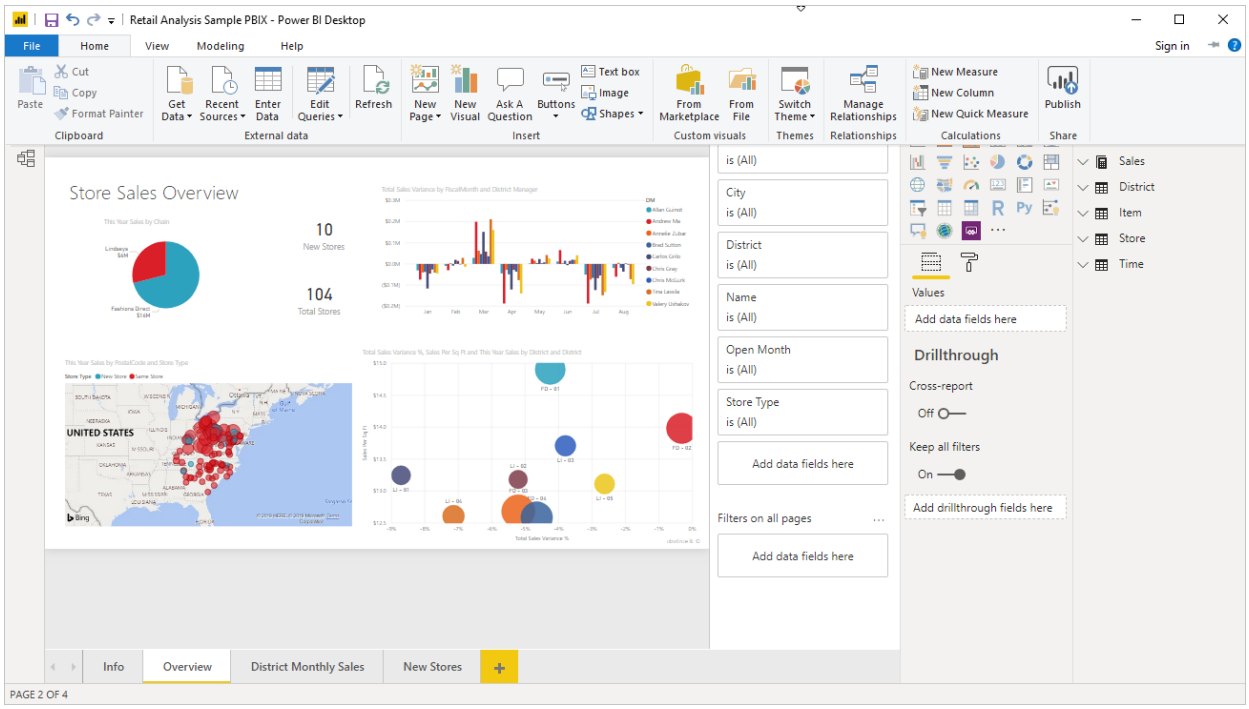
If no visual is selected on the canvas, a new visual is created based on your selection.

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.

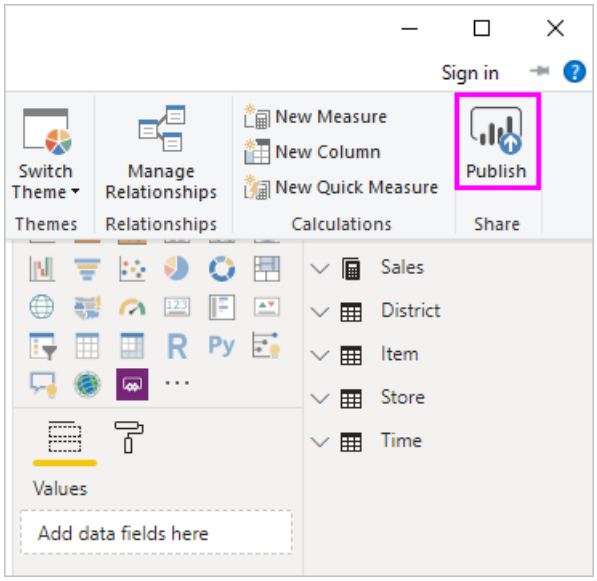


Share reports

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 two ways to get Power BI Desktop:

- Get Power BI Desktop from the Windows Store
- Get Power BI Desktop
- Download Power BI Desktop from the web

What is the Power BI service?

3/5/2021 • 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), 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*.

> 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.

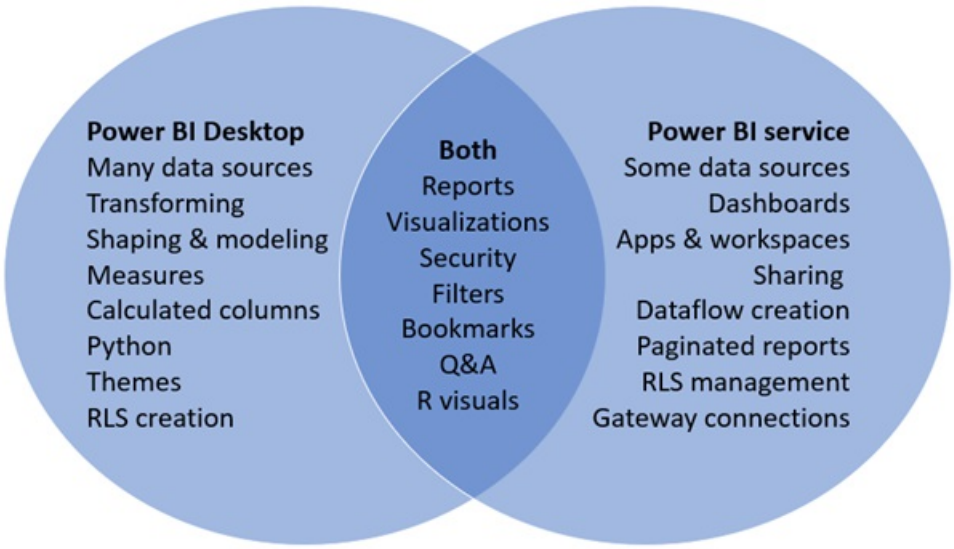
Next steps

- 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

3/5/2021 • 2 minutes to read • Edit Online

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



Power BI Desktop is a complete data analysis and report creation tool that you install for free on your local computer. 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. The Power BI Desktop getting started guide walks through the process.

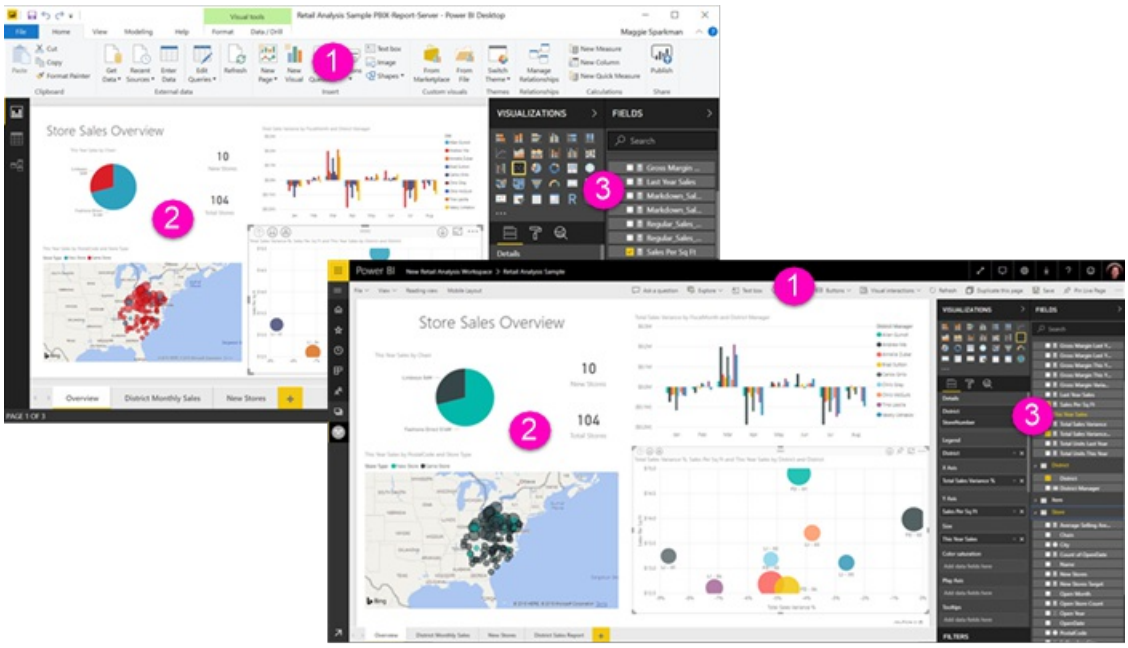
The **Power BI service** is a cloud-based service. It supports light report editing and collaboration for teams and organizations. You can connect to data sources in the Power BI service, too, but modeling is limited.

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* in workspaces backed by a Power BI Premium capacity. 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 Premium?" for more information.

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.

https://www.youtube.com/embed/IkJda4O7oGs

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

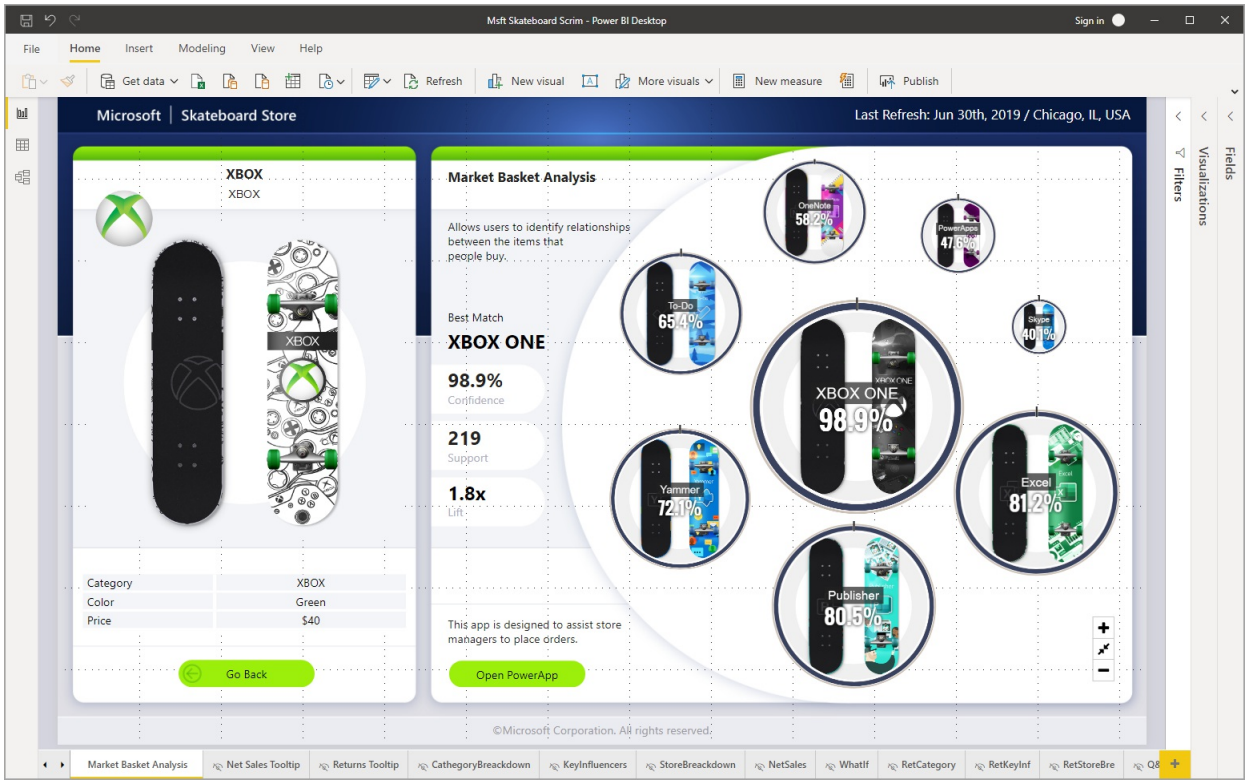
More questions? Try the Power BI Community

Get started with Power BI Desktop

3/18/2021 • 20 minutes to read • Edit Online

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**
>
> 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.

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.

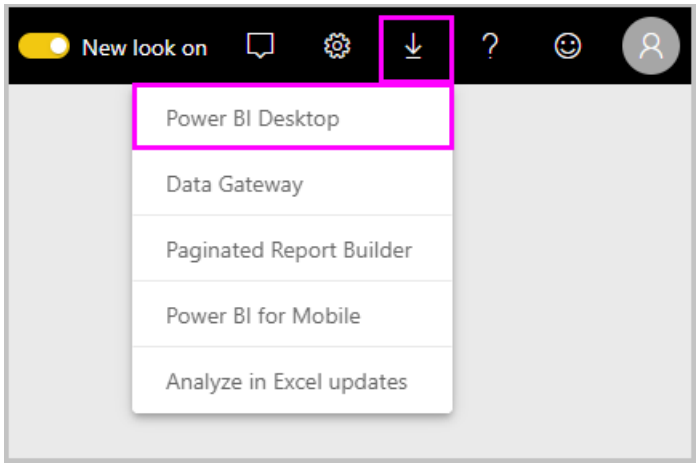
Power BI Desktop centralizes, simplifies, and streamlines what can otherwise be a scattered, disconnected, and arduous process of designing and creating business intelligence repositories and reports. Ready to give it a try? Let's get started.

> **NOTE**
> 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 works only with the Report Server version of Power BI. This article describes standard Power BI Desktop.

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.

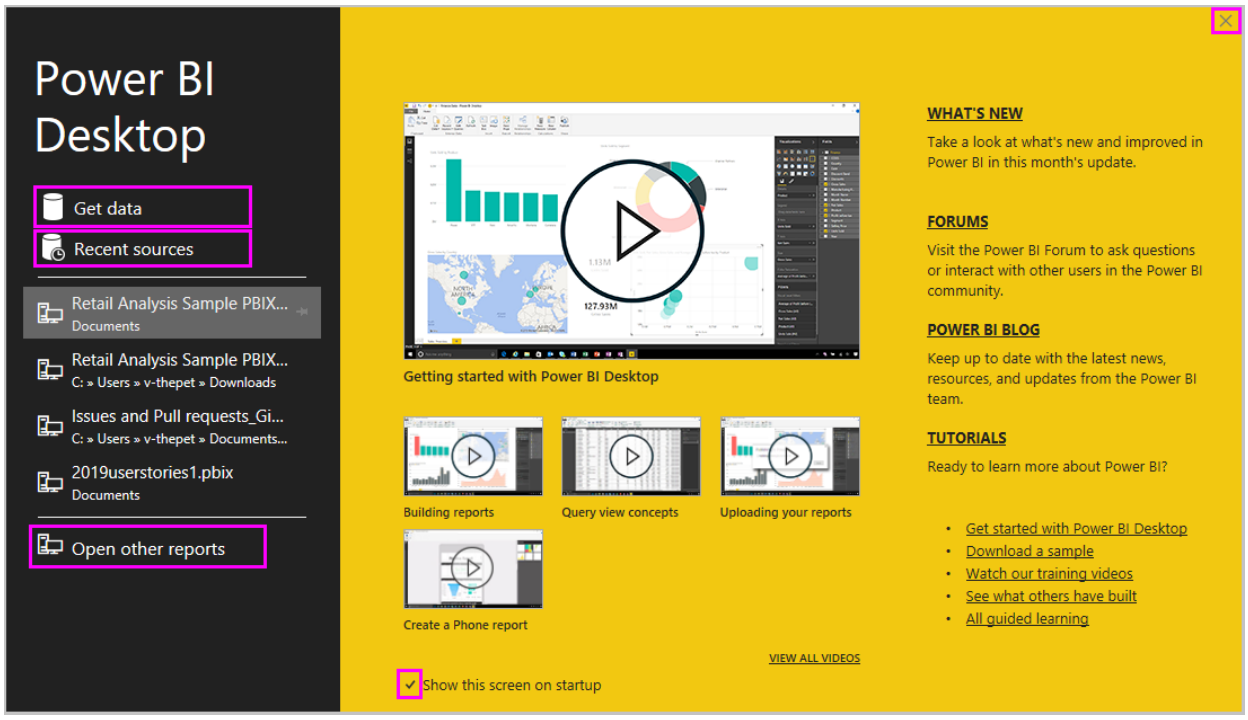
You can also download Power BI Desktop from the Power BI service. Select the **Download** icon in the top menu bar, and then select **Power BI Desktop**.



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.

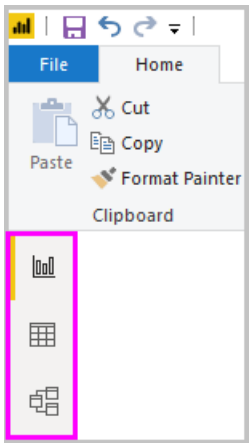
The first time Power BI Desktop starts, it displays the **Welcome** screen.

From the **Welcome** screen, you can **Get data**, see **Recent sources**, open recent reports, **Open other reports**, or select other links. You can also choose whether to always show the **Welcome** screen at startup. Select the close icon to close the **Welcome** screen.

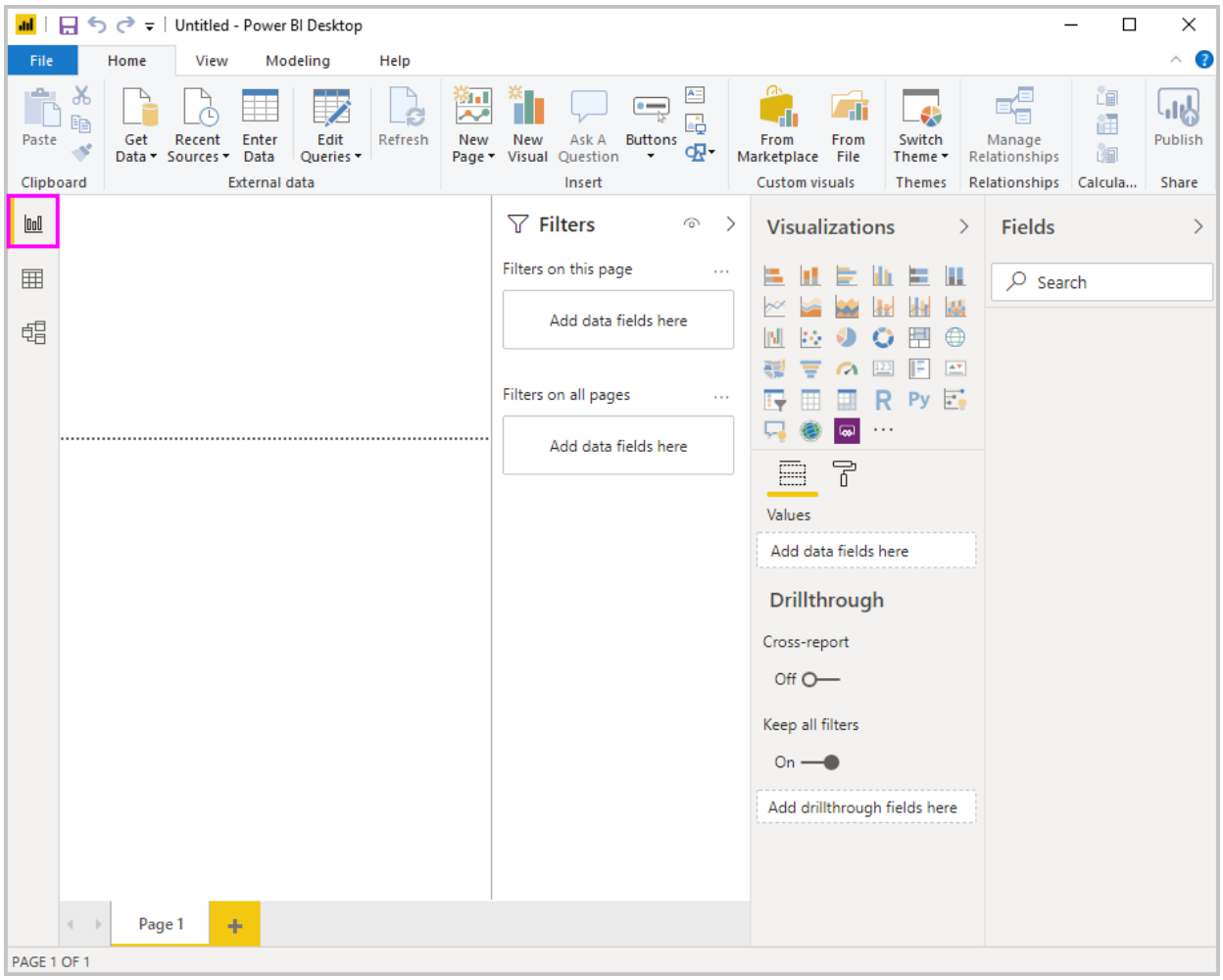


Along the left side of Power BI Desktop are icons for the three Power BI Desktop views: **Report**, **Data**, and **Model**, from top to bottom. The current view is indicated by the yellow bar along the left, and you can change views by selecting any of the icons.

If you are 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.



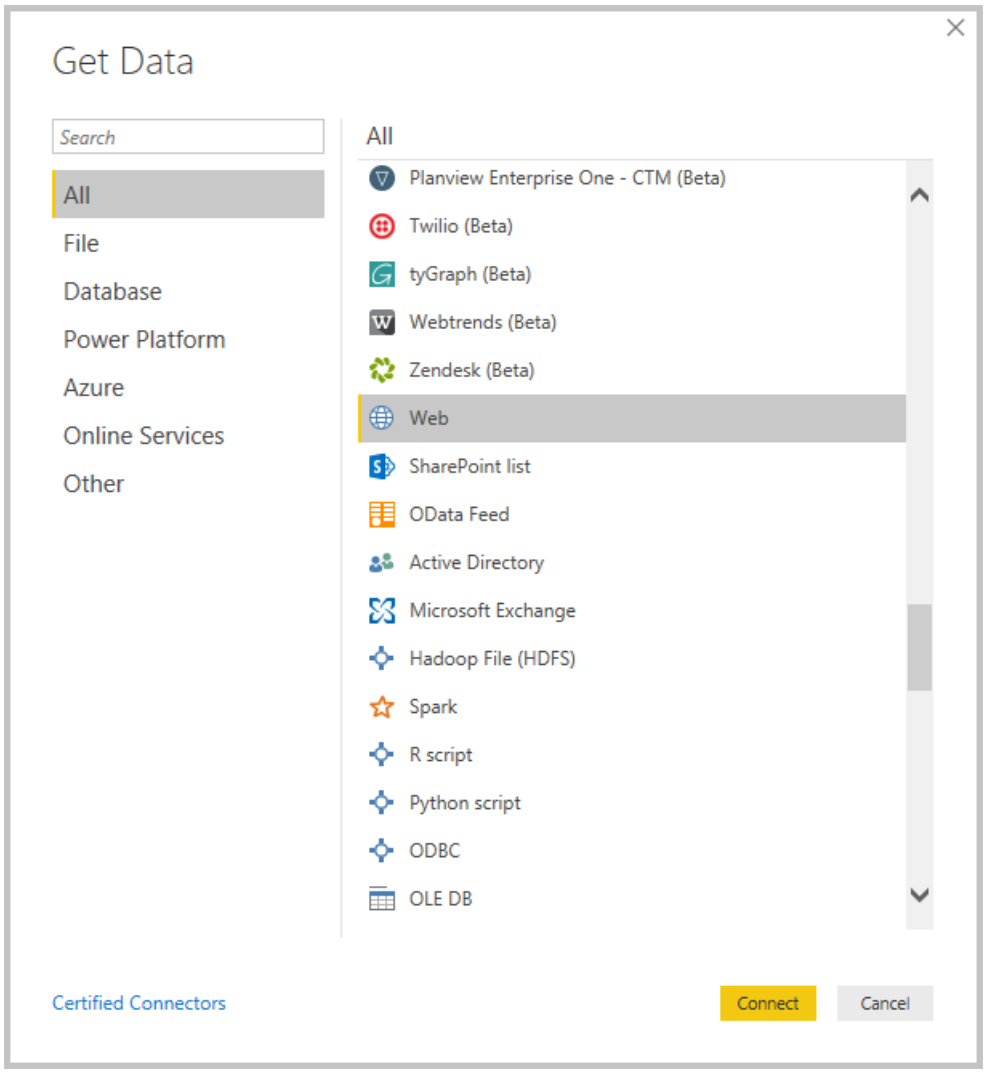
Report view is the default view.



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.

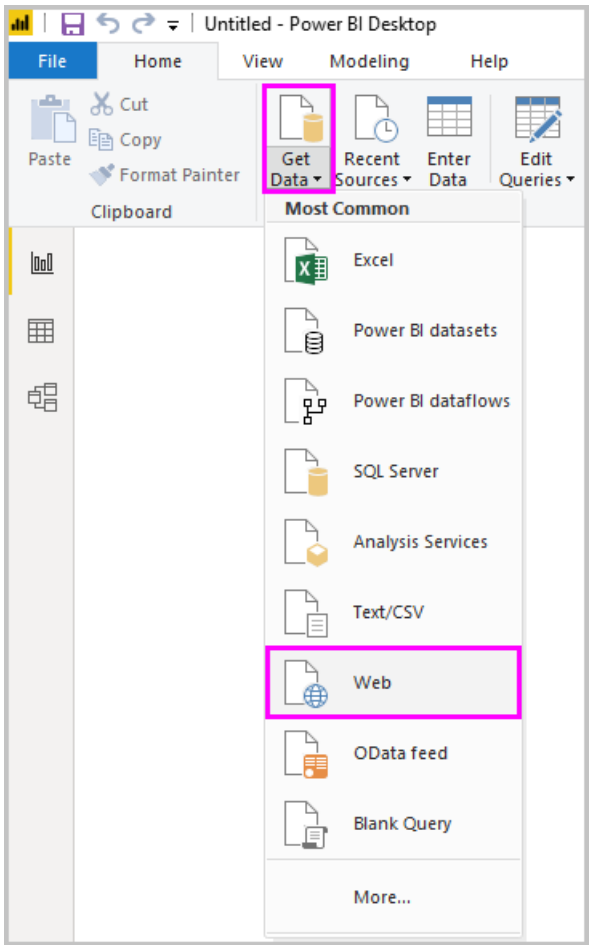
Connect to data

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.

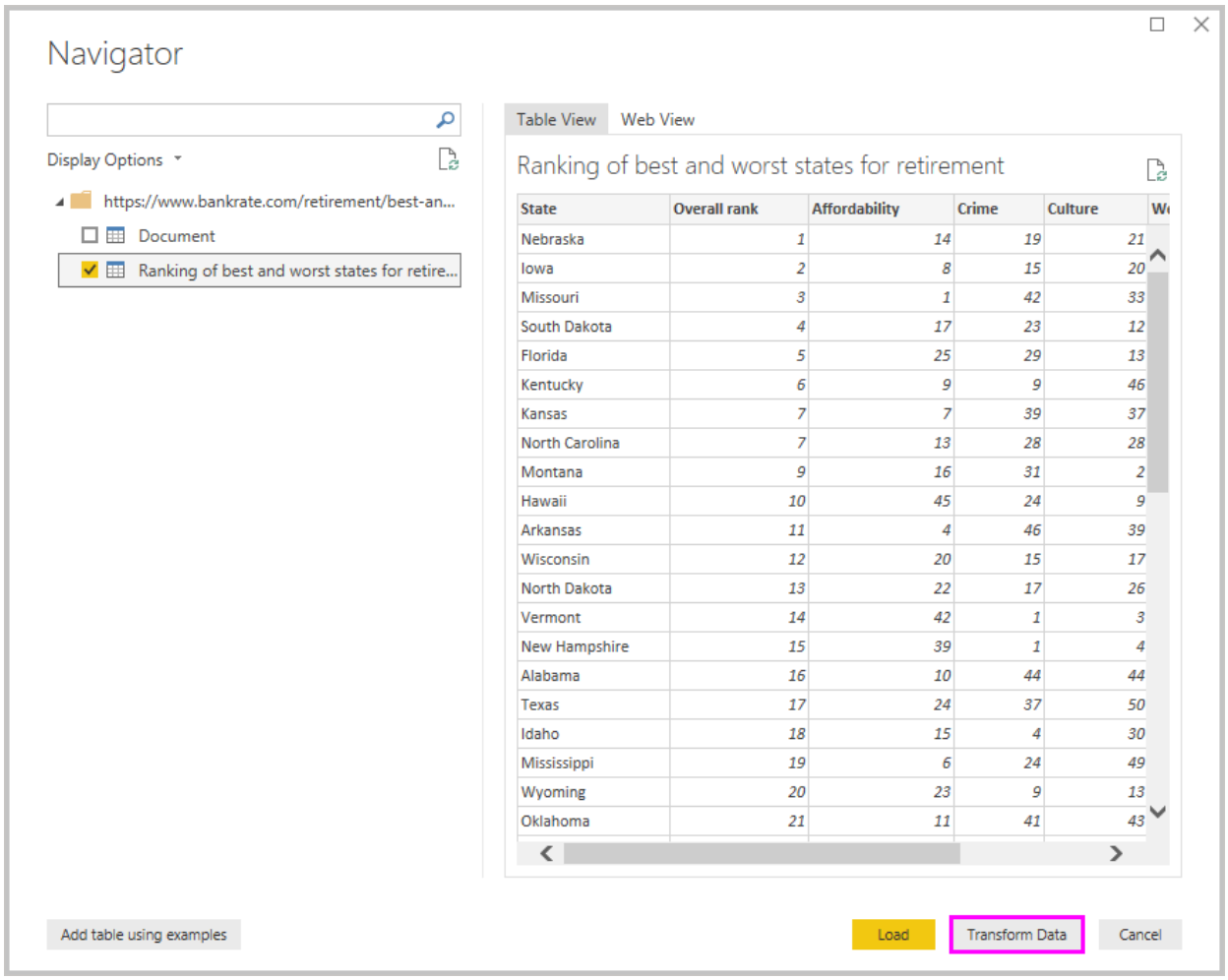


In the **From Web** dialog box, paste the address *https://www.bankrate.com/retirement/best-and-worst-states-for-retirement/* into the **URL** field, and select **OK**.

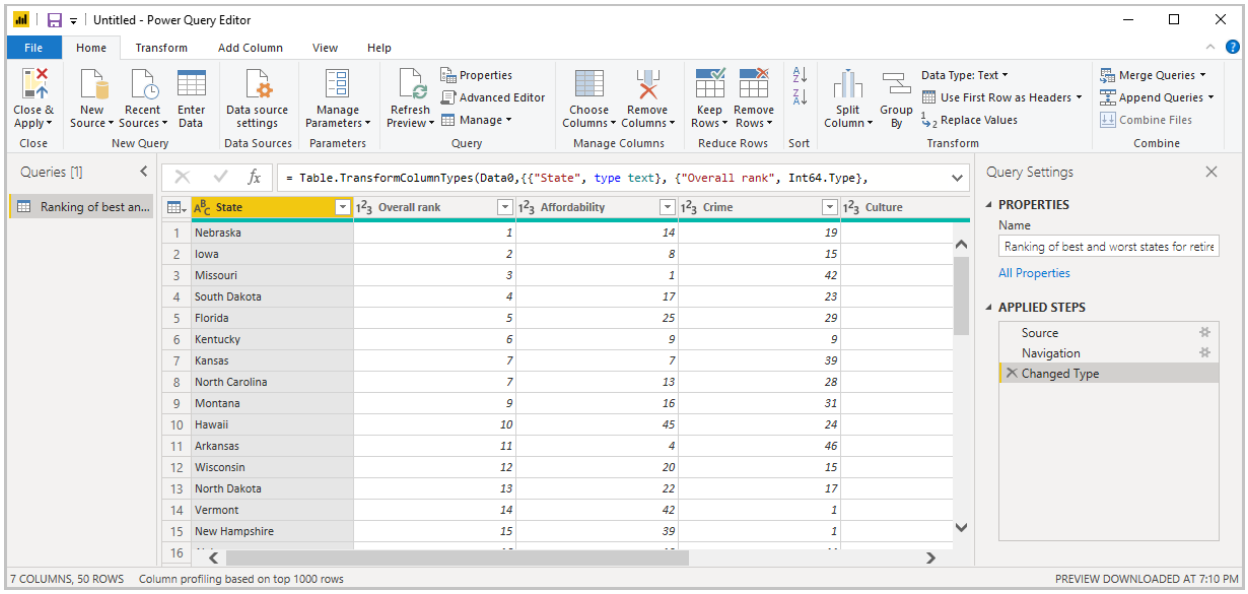
If prompted, on the **Access Web Content** screen, select **Connect** to use anonymous access.

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 a table called **Ranking of best and worst states for retirement**, and a document. You're interested in the 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.



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.



For more information about connecting to data, see Connect to data in Power BI Desktop.

Shape data

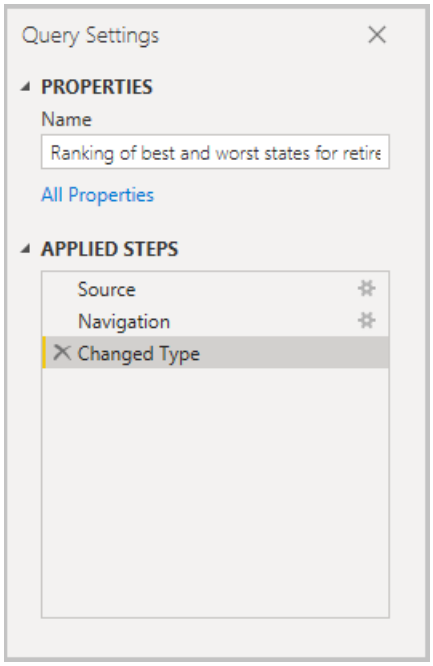
Now that you're connected to a data source, you can adjust the data to meet your needs. To *shape* data, you provide Power Query Editor with step-by-step instructions for adjusting the data while loading and presenting it. Shaping doesn't affect the original data source, only this particular view of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

NOTE

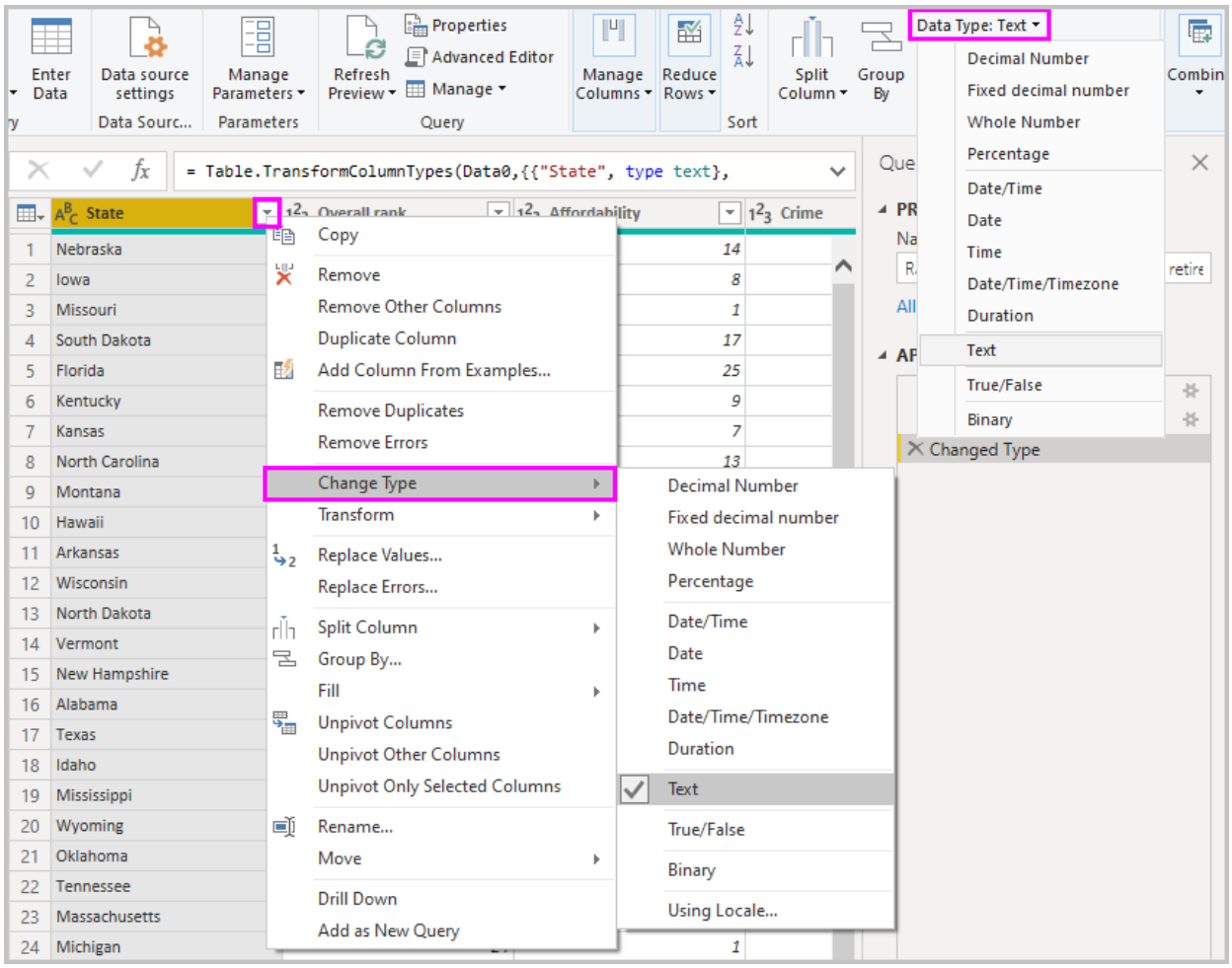
The table data used in this guide might change over time. As such, the steps you need to follow might vary, requiring you to be creative about how you adjust steps or outcomes, which is all part of the fun of learning.

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.

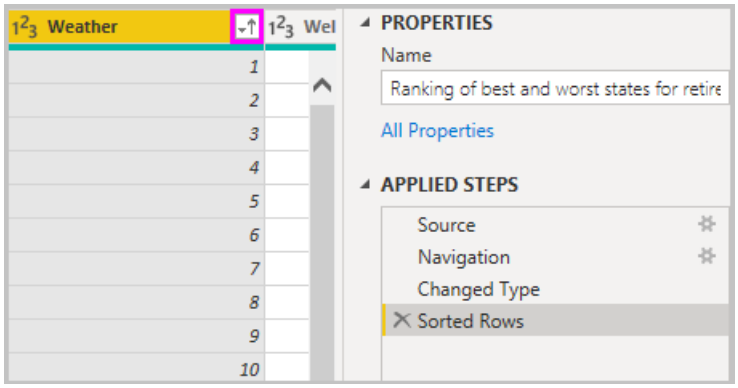


NOTE

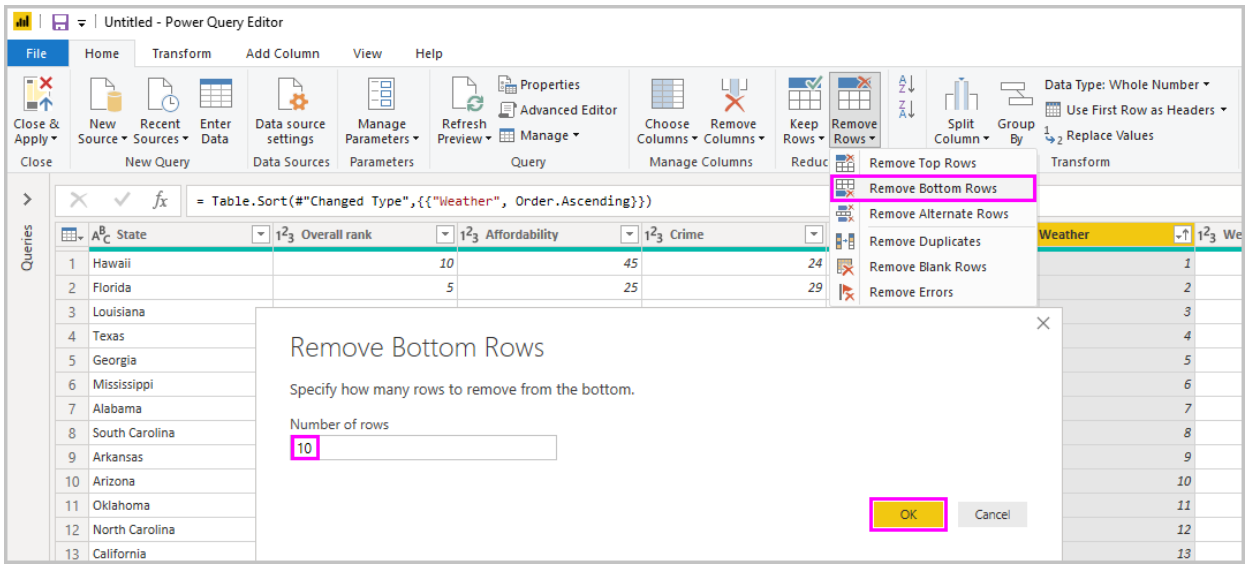
The Power Query Editor in Power BI Desktop uses the ribbon or the right-click menus for available tasks. Most of the tasks you can select on the **Home** or **Transform** tabs of the ribbon are also available by right-clicking an item and choosing from the menu that appears.

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**.



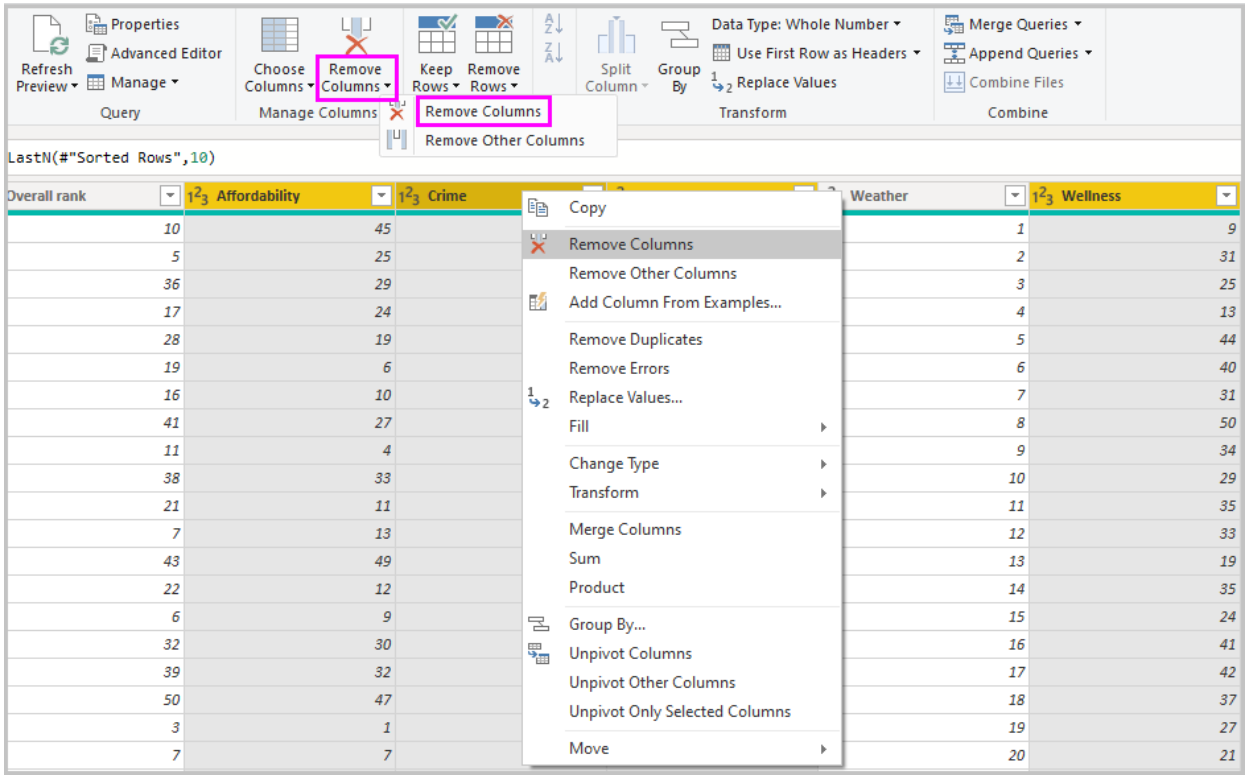
You're not very interested in selling sunglasses to the worst weather states, so you decide to remove them from the table. From the **Reduce Rows** group of the **Home** tab, select **Remove Rows** > **Remove Bottom Rows**. In the **Remove Bottom Rows** dialog box, enter *10*, and then select **OK**.



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

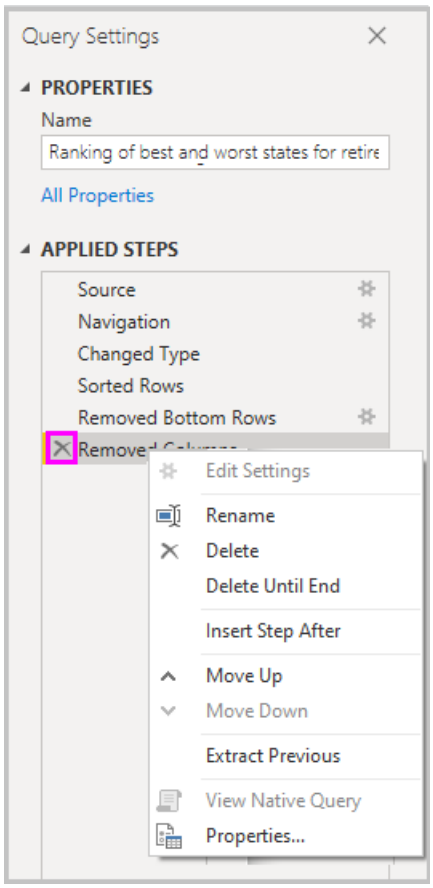
You decide the table has too much extra information for your needs, and to remove the **Affordability**, **Crime**, **Culture**, and **Wellness** columns. Select the header of each column that you want to remove. Hold down the **Shift** key to select several adjacent columns, or **Ctrl** to select non-adjacent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

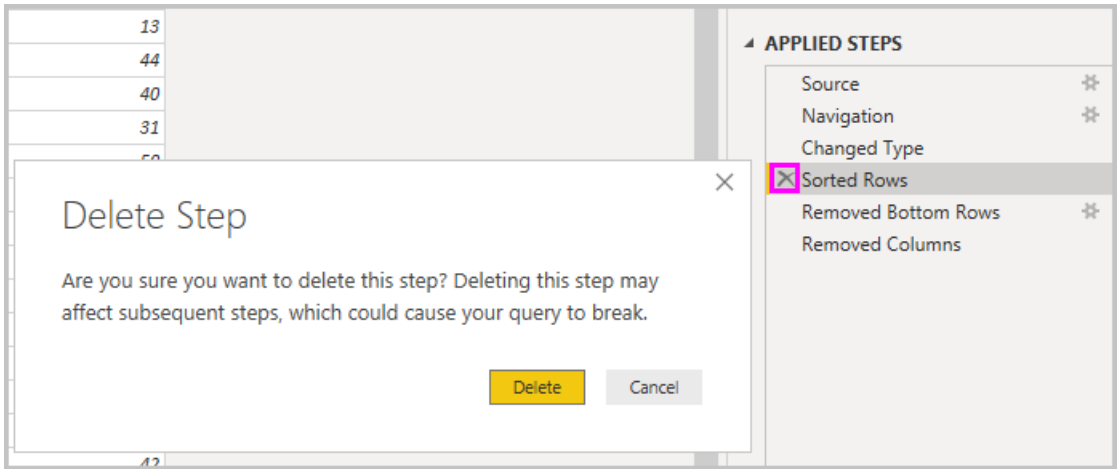


On second thought, **Affordability** might be relevant to sunglasses sales after all. You'd like to get that column back. You can easily undo the last step in the **Applied Steps** pane by selecting the **X** delete icon next to the step. Now redo the step, selecting only the columns you want to delete.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

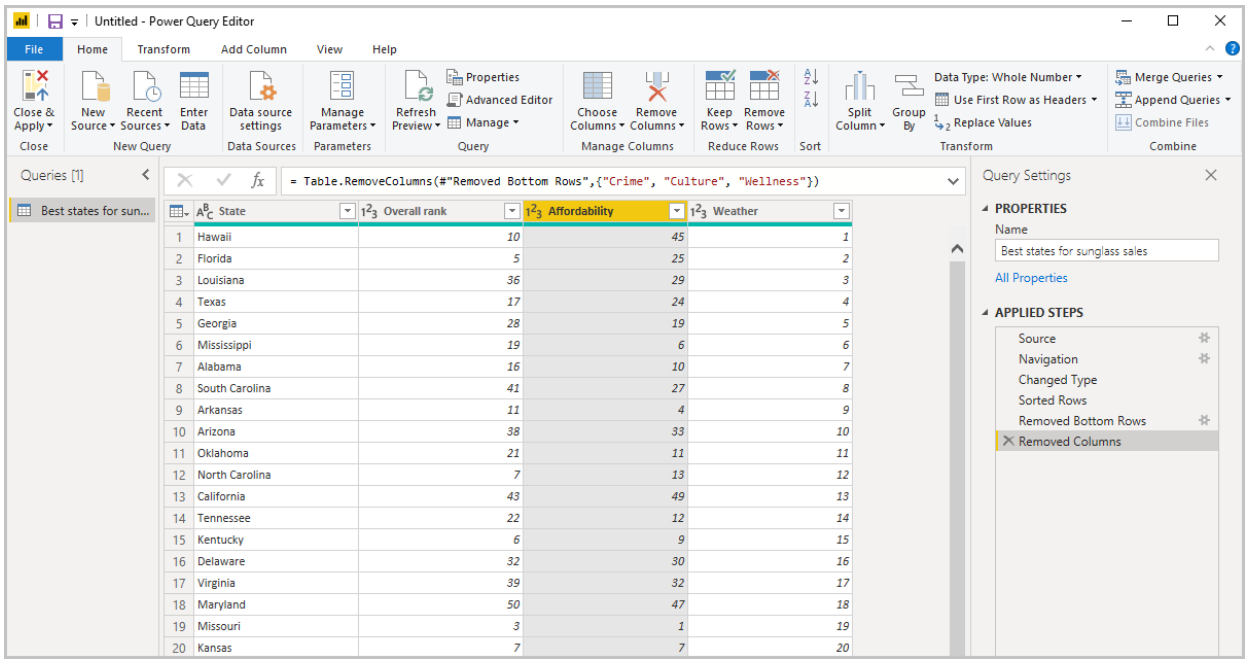


For example, if you no longer wanted to sort the table by **Weather**, you might try to delete the **Sorted Rows** step. Power BI Desktop warns you that deleting this step could cause your query to break. You removed the bottom 10 rows after you sorted by weather, so if you remove the sort, different 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 sunglass sales instead of retirement. Under **Properties** in the **Query Settings** pane, replace the old title with *Best states for sunglass sales*.

The finished query for your shaped data looks like this:



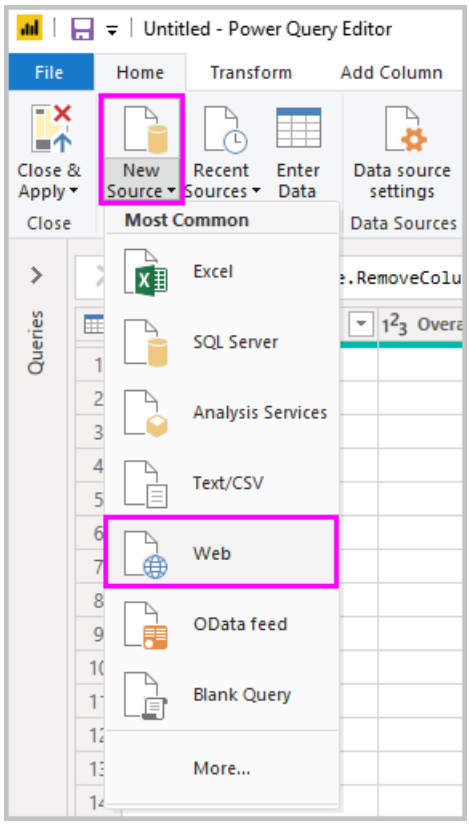
For more information about shaping data, see Shape and combine data in Power BI Desktop.

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.



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

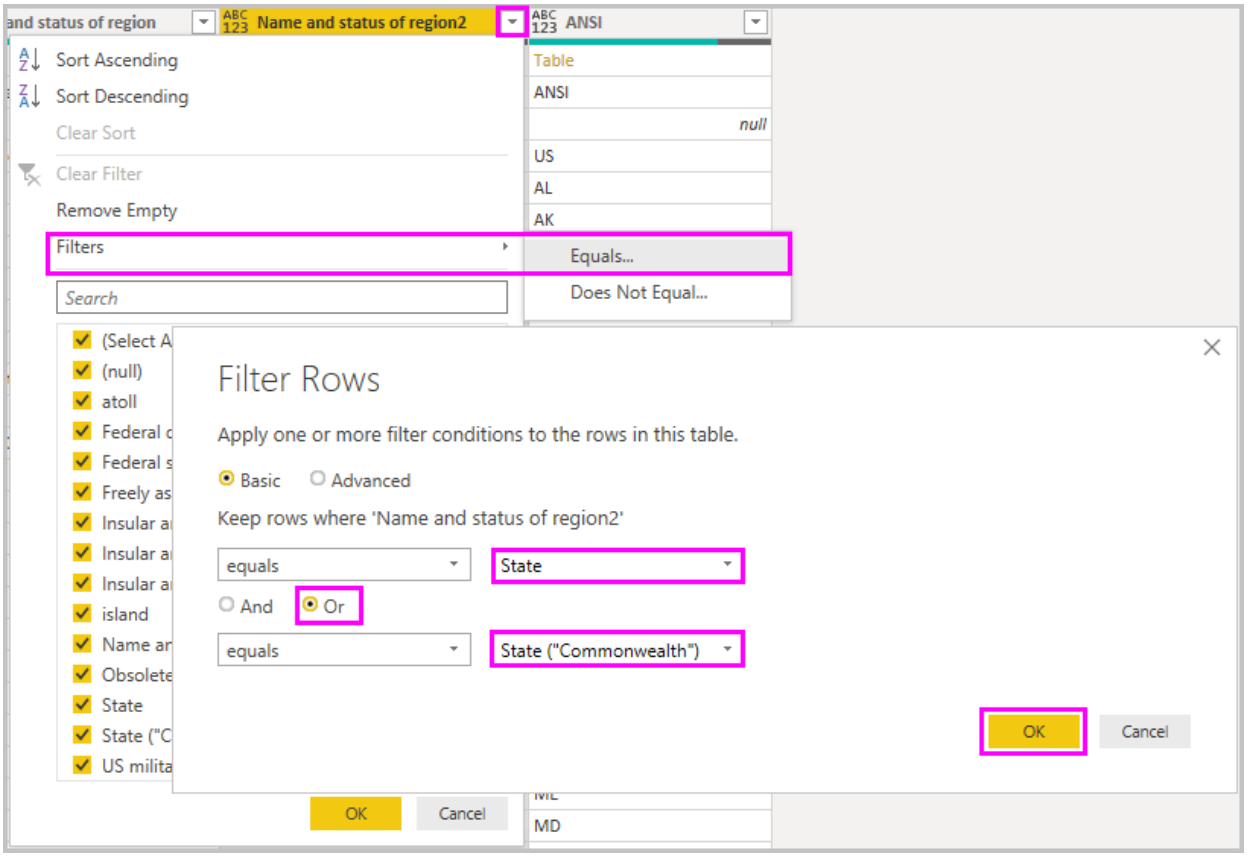
https://en.wikipedia.org/wiki/List_of_U.S._state_abbreviations.

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 region2**, 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 region2** 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 **Or**, and next to the second **equals** field, select **State ("Commonwealth")**. 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:

	State name	Status	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 ("Commonwealth")	KY

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

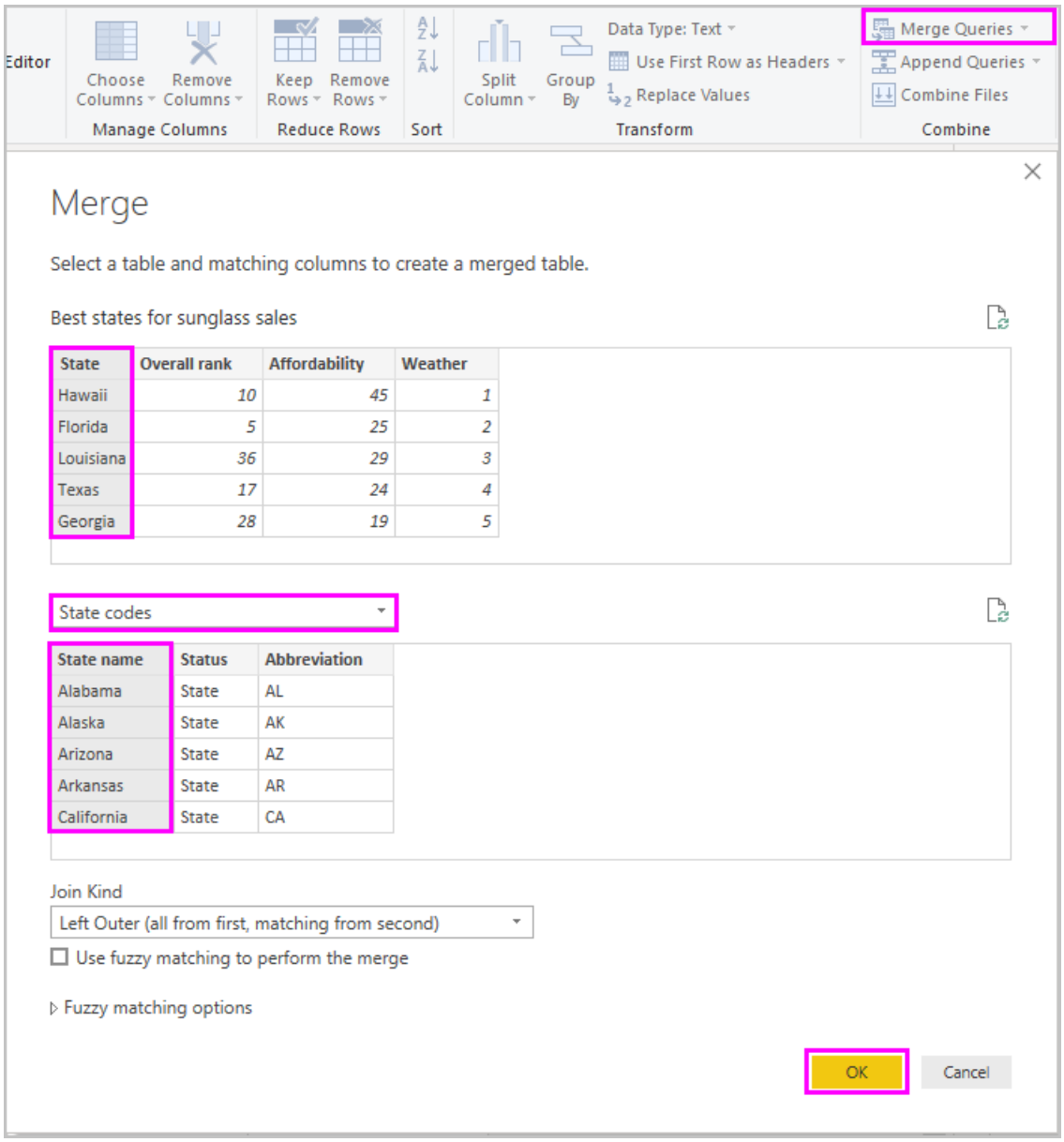
With the **State codes** table shaped, you can *combine* these two tables into one. Since the tables you now have are a result of queries you applied to the data, they're also called *queries*. There are two primary ways of combining queries: *merge* and *append*.

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.

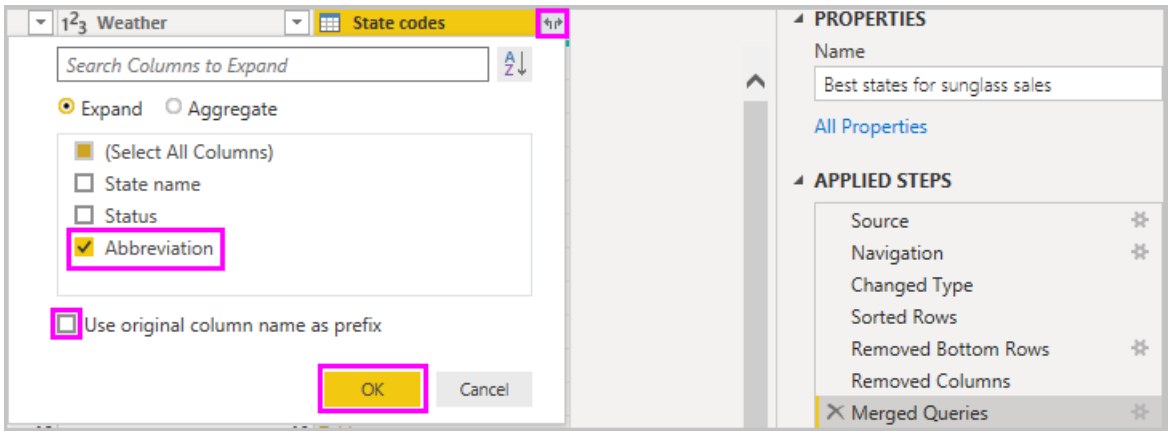
If you get a **Privacy levels** dialog, select **Ignore privacy levels checks for this file** and then select **Save**. Select **OK**.



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

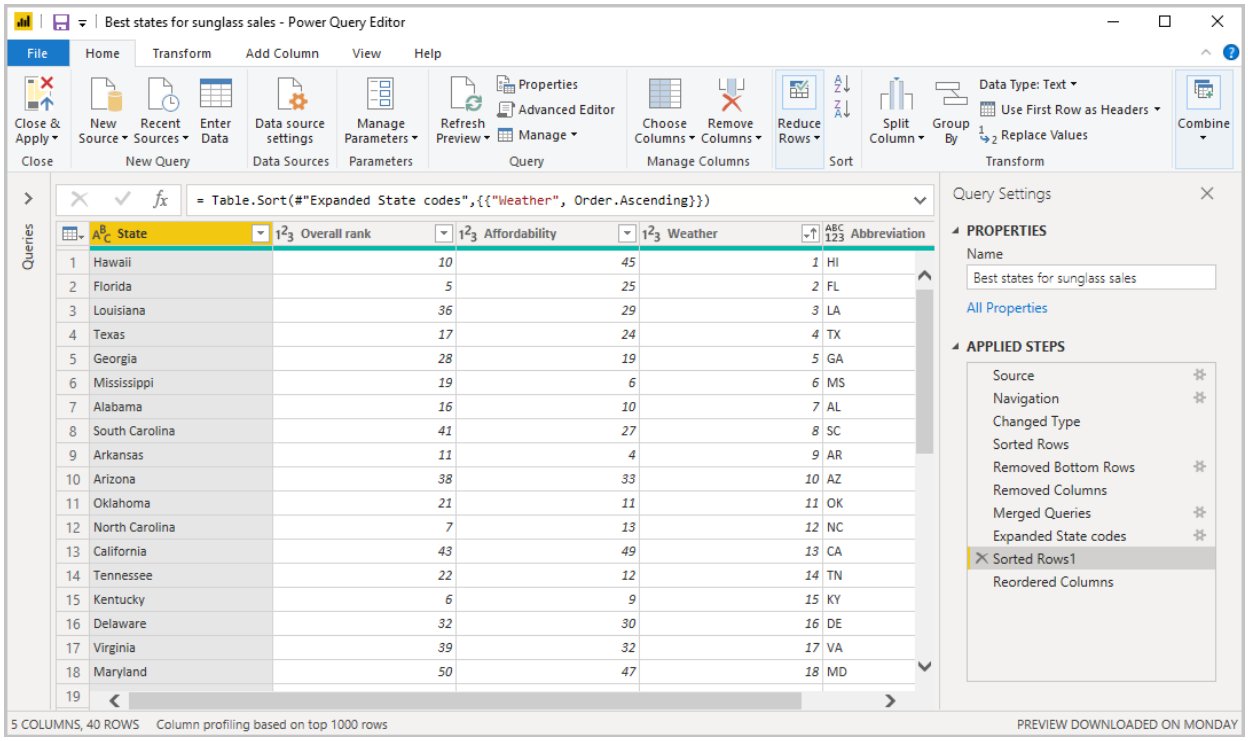


NOTE

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.

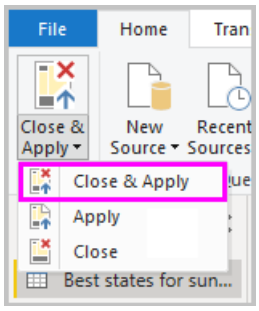
For a more complete description of the shape and combine data steps, see Shape and combine data in Power BI Desktop.

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 lots of additional, interesting data connections, such as demographics, wealth levels, or recreational opportunities in the states.



	State	Overall rank	Affordability	Weather	Abbreviation
1	Hawaii	10	45	1	HI
2	Florida	5	25	2	FL
3	Louisiana	36	29	3	LA
4	Texas	17	24	4	TX
5	Georgia	28	19	5	GA
6	Mississippi	19	6	6	MS
7	Alabama	16	10	7	AL
8	South Carolina	41	27	8	SC
9	Arkansas	11	4	9	AR
10	Arizona	38	33	10	AZ
11	Oklahoma	21	11	11	OK
12	North Carolina	7	13	12	NC
13	California	43	49	13	CA
14	Tennessee	22	12	14	TN
15	Kentucky	6	9	15	KY
16	Delaware	32	30	16	DE
17	Virginia	39	32	17	VA
18	Maryland	50	47	18	MD

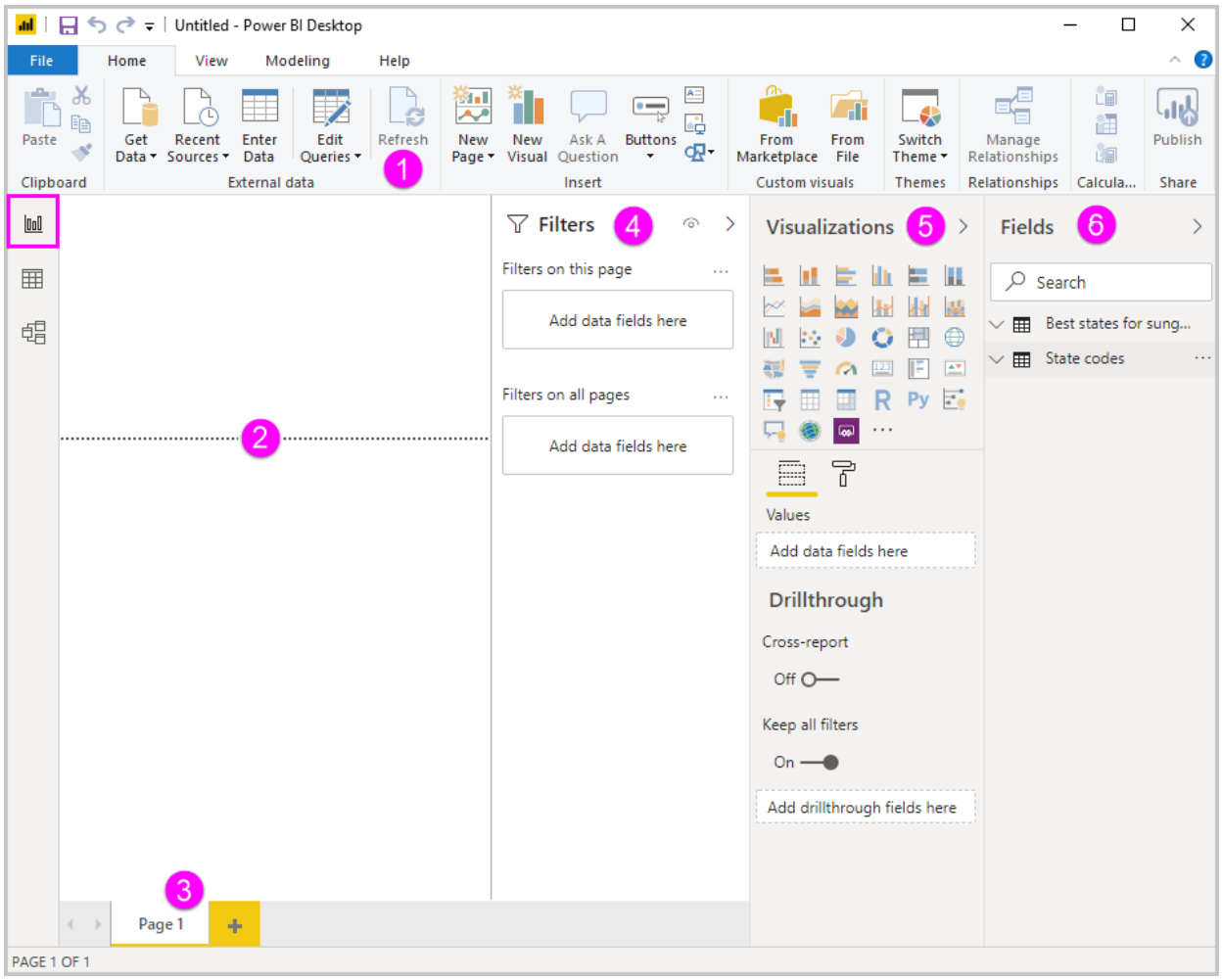
For now, you have enough data to create an interesting report in Power BI Desktop. Since this is a milestone, apply the changes in **Power Query Editor** and load them into Power BI Desktop by selecting **Close & Apply** from the **Home** tab of the ribbon. You can also select just **Apply** to keep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



You can make more changes to a table after it is 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 **Edit Queries** on the **Home** tab of the Power BI Desktop ribbon.

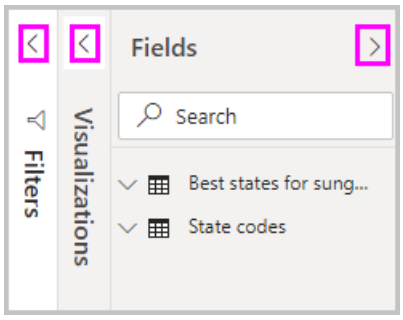
Build reports

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

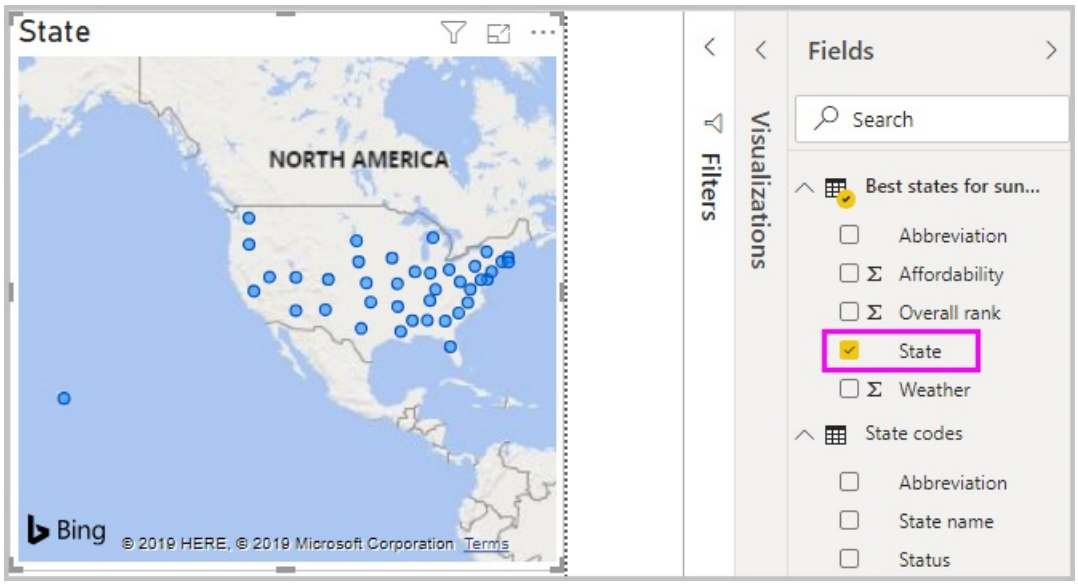


1. The ribbon at the top, which displays common tasks associated with reports and visualizations.
2. The canvas area in the middle, where visualizations are created and arranged.
3. The pages tab area at the bottom, which lets you select or add report pages.
4. The **Filters** pane, where you can filter data visualizations.
5. The **Visualizations** pane, where you can add, change, or customize visualizations, and apply drillthrough.
6. The **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.

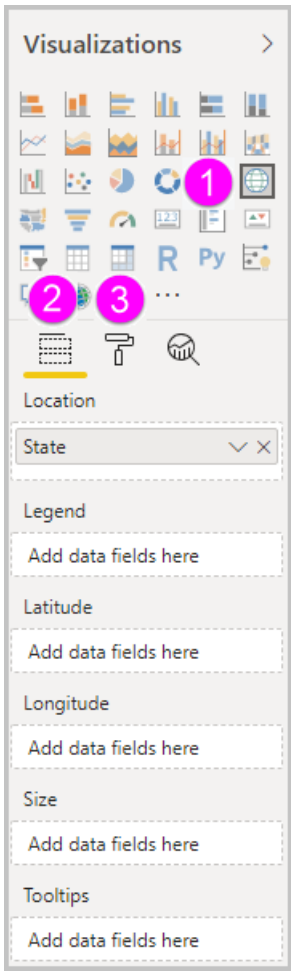


To create a simple visualization, just select any field in the fields list, or drag the field from the **Fields** list onto the canvas. For example, drag the **State** field from **Best states for sunglass sales** onto the canvas, and see what happens.



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.

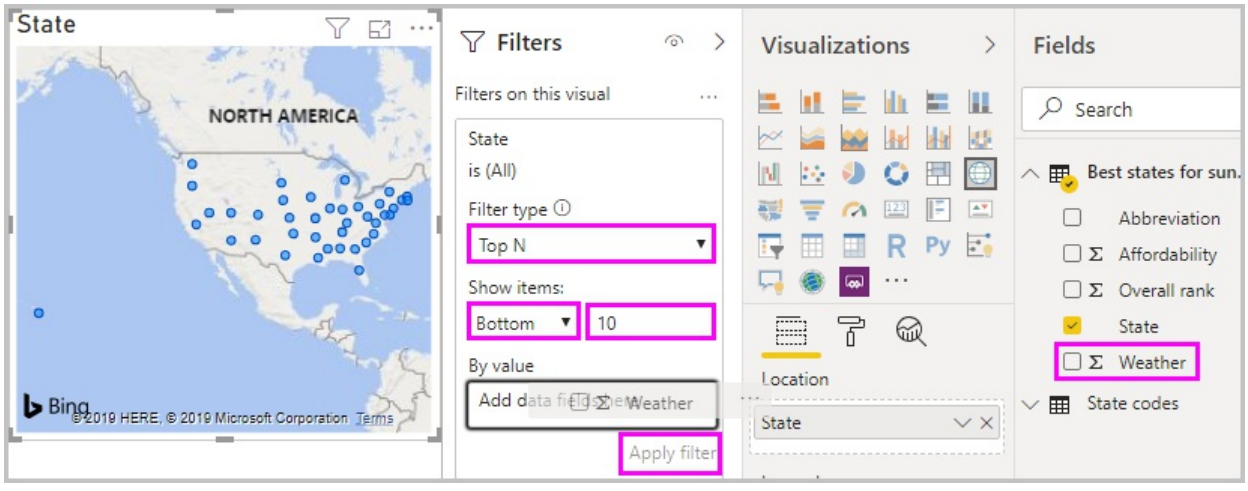


1. The icons show the type of visualization created. You can change the type of a selected visualization by selecting a different icon, or create a new visualization by selecting an icon with no existing visualization selected.
2. The **Fields** option in the **Visualization** pane lets you drag data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

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

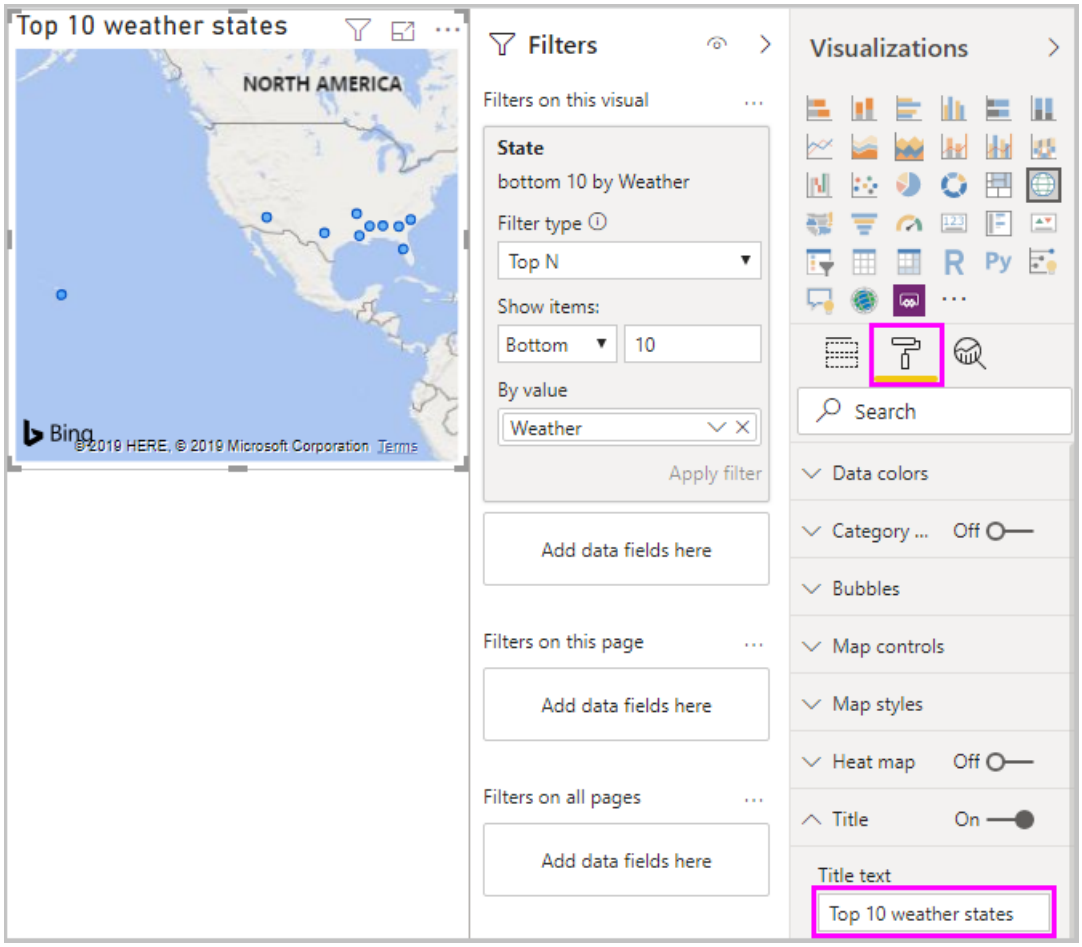
You want your map visualization to show only the top 10 weather states. To show only the top 10 states, in the **Filters** pane, hover over **State is (All)** and expand the arrow that appears. Under **Filter type**, drop down and select **Top N**. Under **Show items**, select **Bottom**, because you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

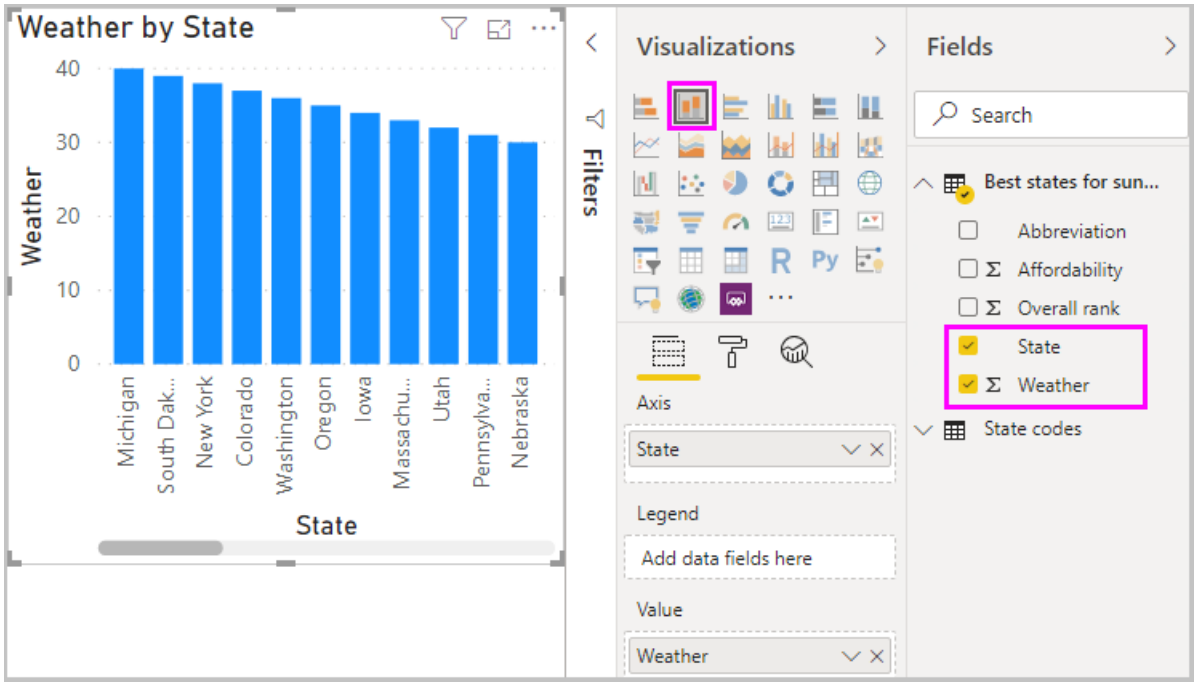


You now see only the top 10 weather states in the map visualization.

Retitle your visualization by selecting the **Format** icon in the **Visualization** pane, selecting **Title**, and typing *Top 10 weather states* under **Title text**.

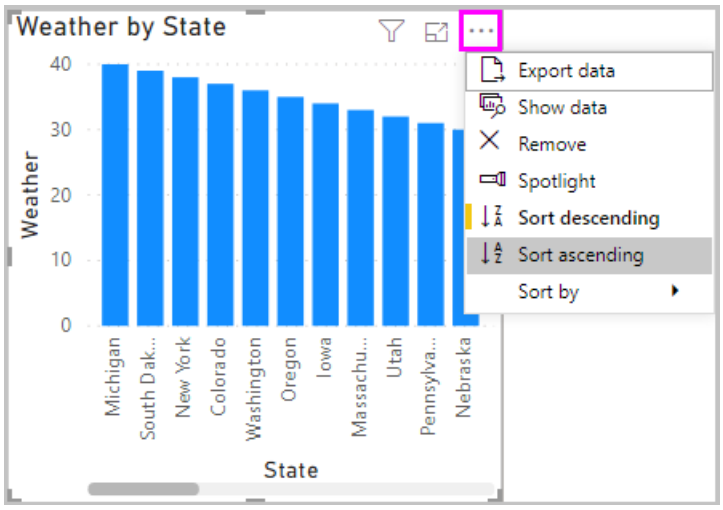


To add a visualization that shows the names of the top 10 weather states and their ranks from 1 to 10, select a blank area of the canvas and then select the **Column chart** icon from the **Visualization** pane. In the **Fields** pane, select **State** and **Weather**. A column chart shows the 40 states 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 the **More options** ellipsis at the upper

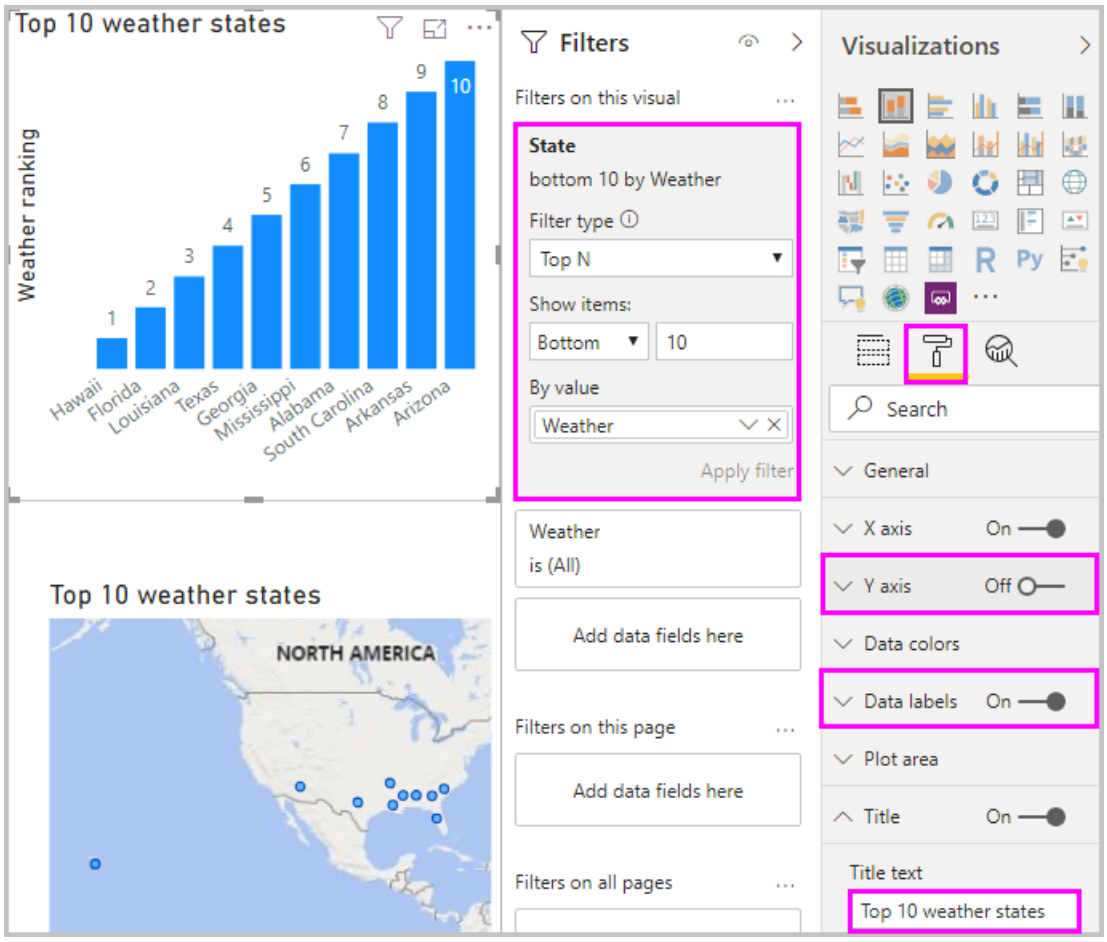
right of the visualization, and select **Sort ascending** from the menu.



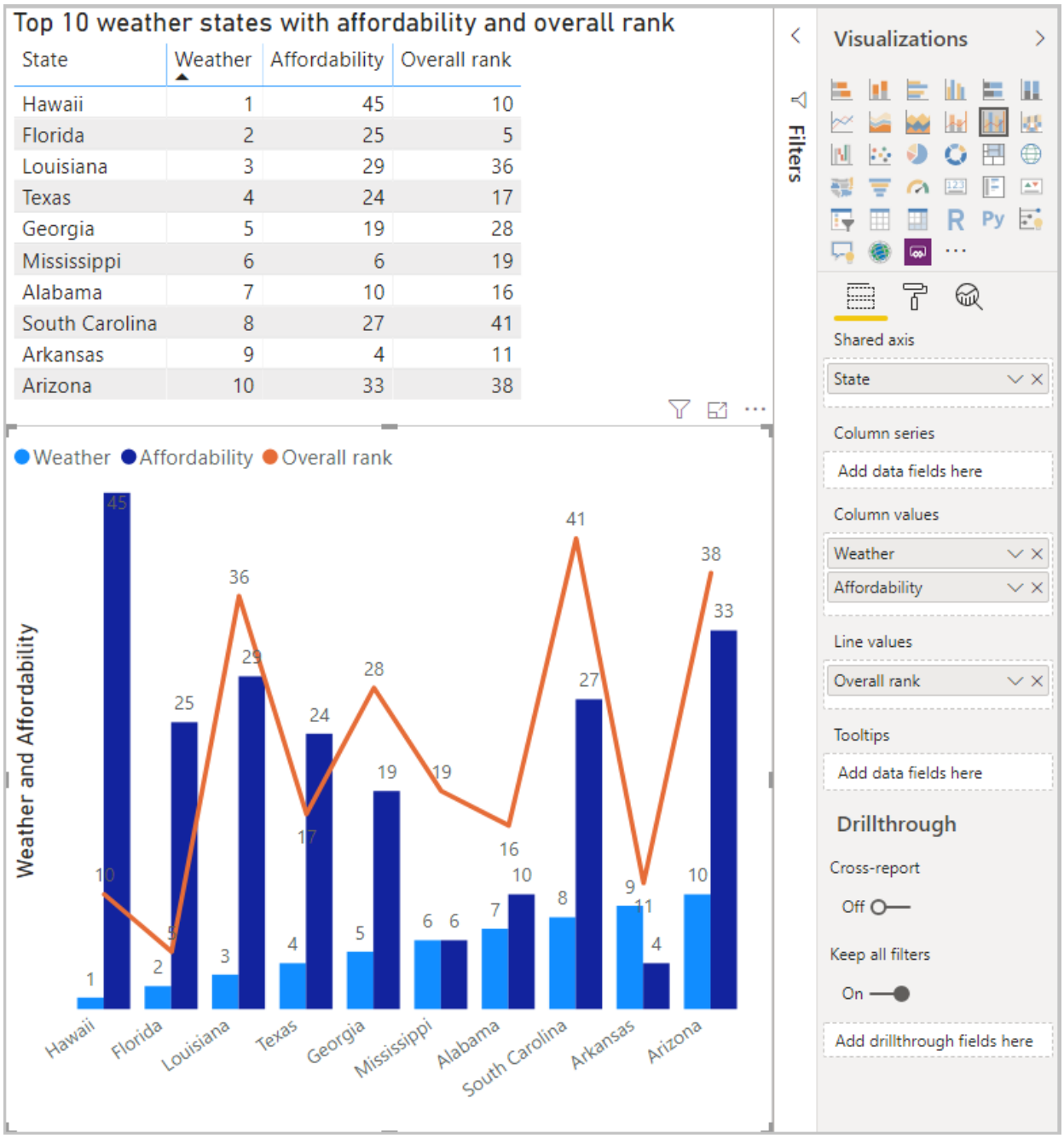
To limit the table to the top 10 states, apply the same bottom 10 filter as you did for the map visualization.

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**, and turn **Data labels** to **On**.

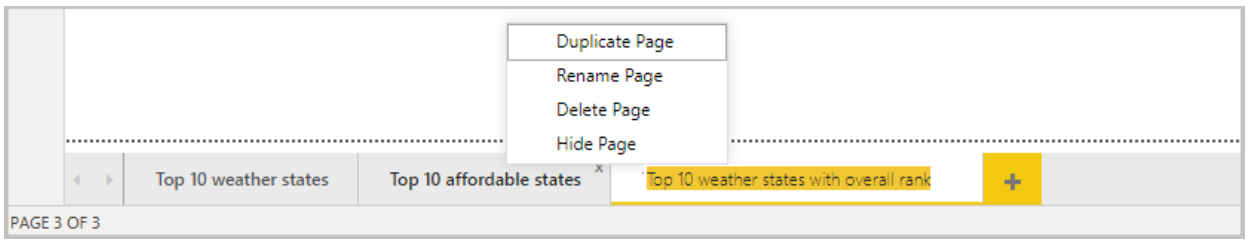
Now, the top 10 weather states appear in ranked order along with their numerical rankings.



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:

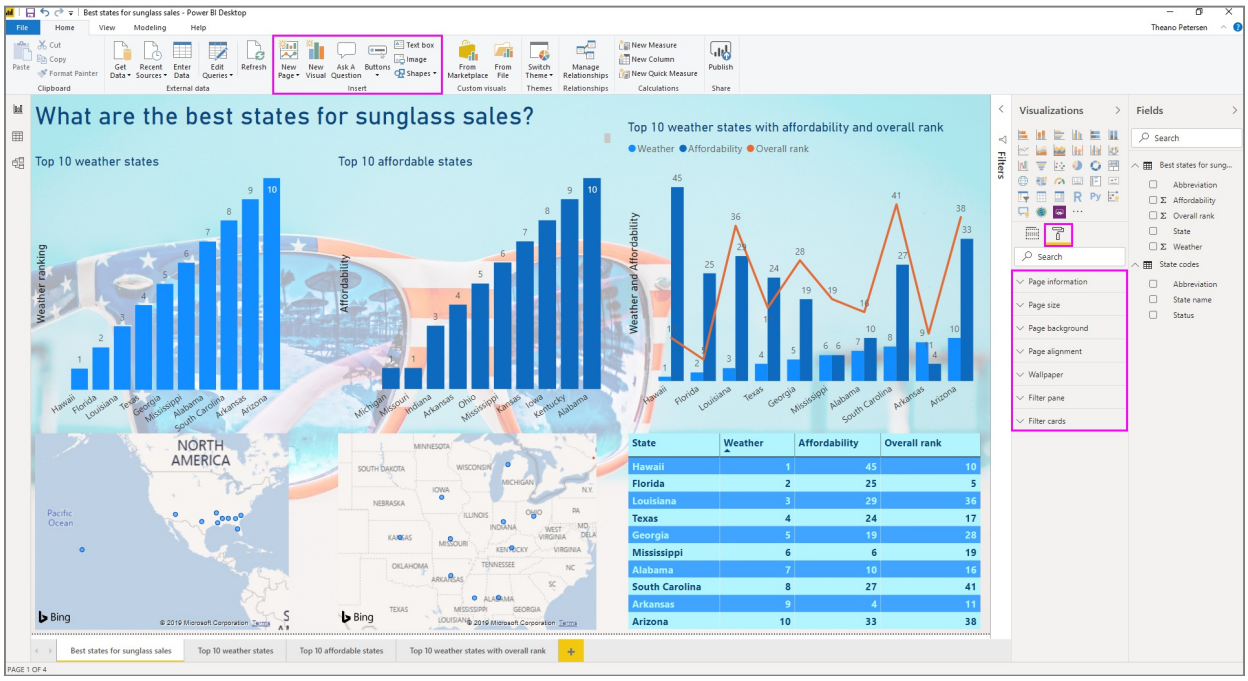


You can show different visualizations on different report pages. To add a new page, select the **+** symbol next to the existing pages on the pages bar, or select **Insert** > **New Page** in the **Home** tab of the ribbon. To rename a page, double-click the page name in the pages bar, or right-click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

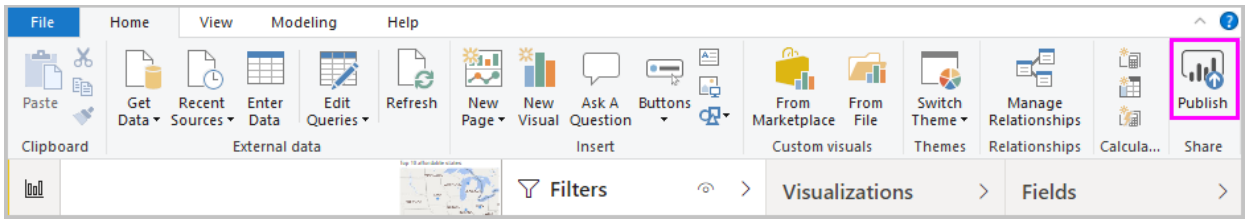


For more information about reports, see Report View in Power BI Desktop.

Share your work

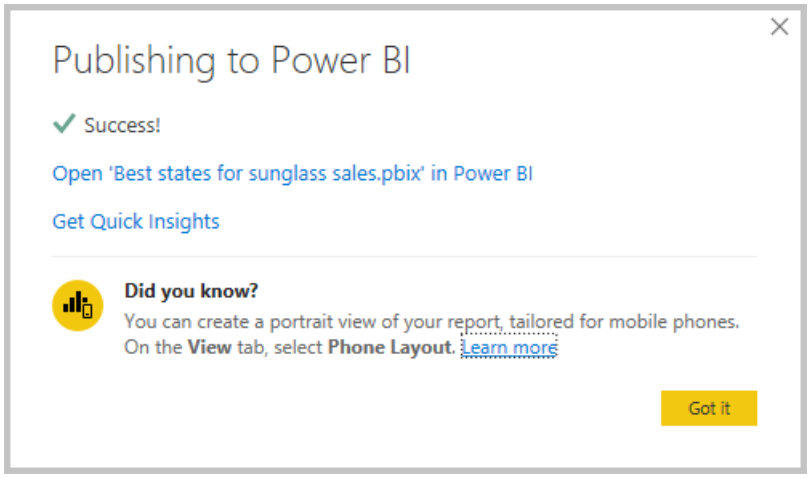
Now that you have a Power BI Desktop report, you can share it with others. There are a few ways to share your work. You can distribute the report *.pbix* file like any other file, you can upload the *.pbix* file from the Power BI service, or you can publish directly from Power BI Desktop to the Power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



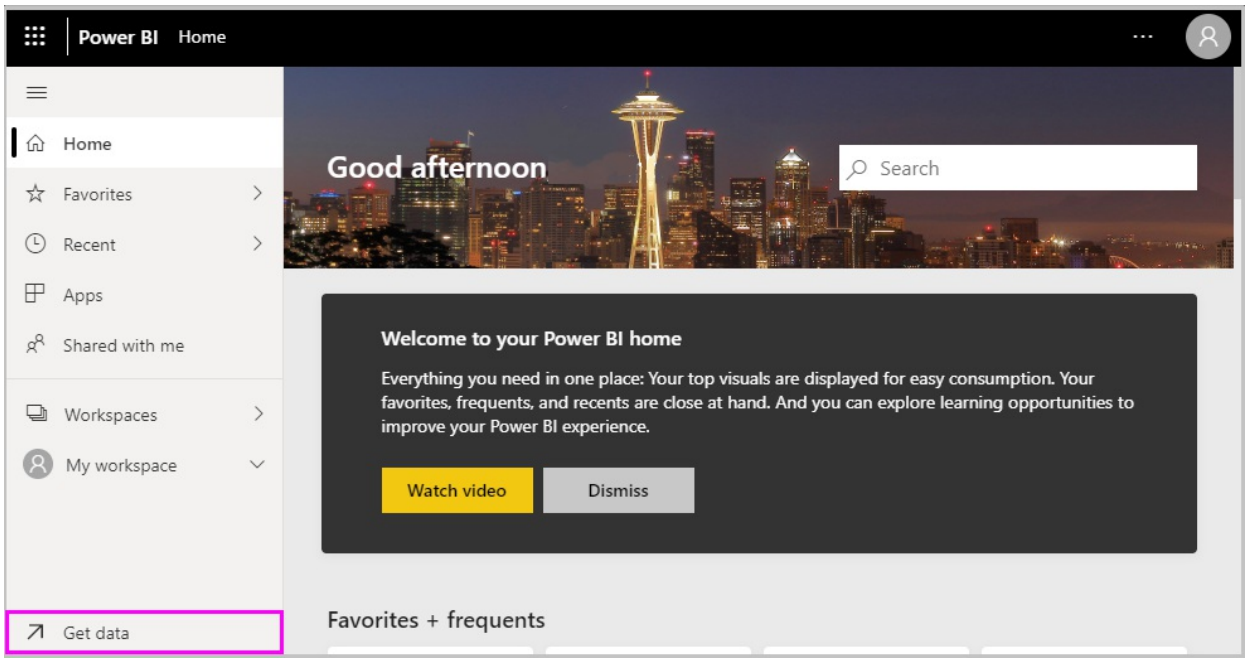
You may be prompted to sign in to Power BI, or to select a destination.

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

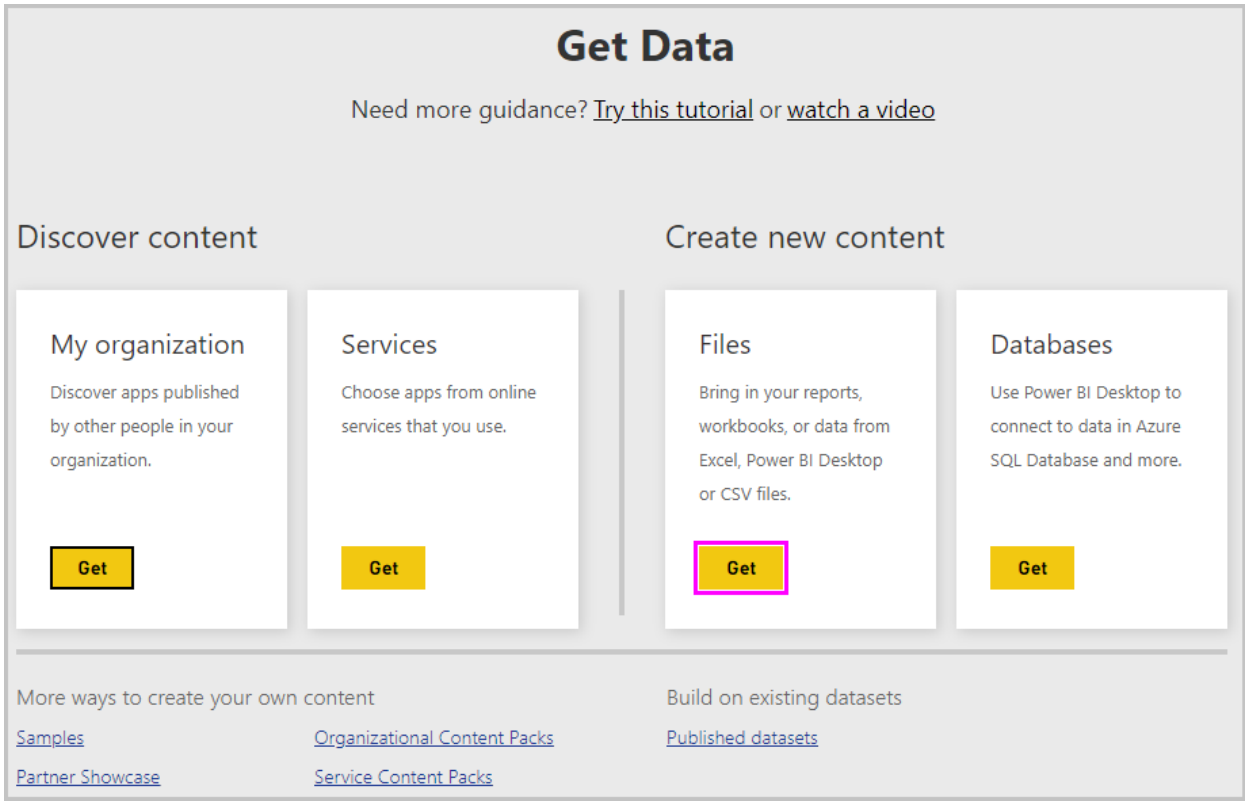


When you select the link to open the report in Power BI, your report opens in your Power BI site under **My workspace** > **Reports**.

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.

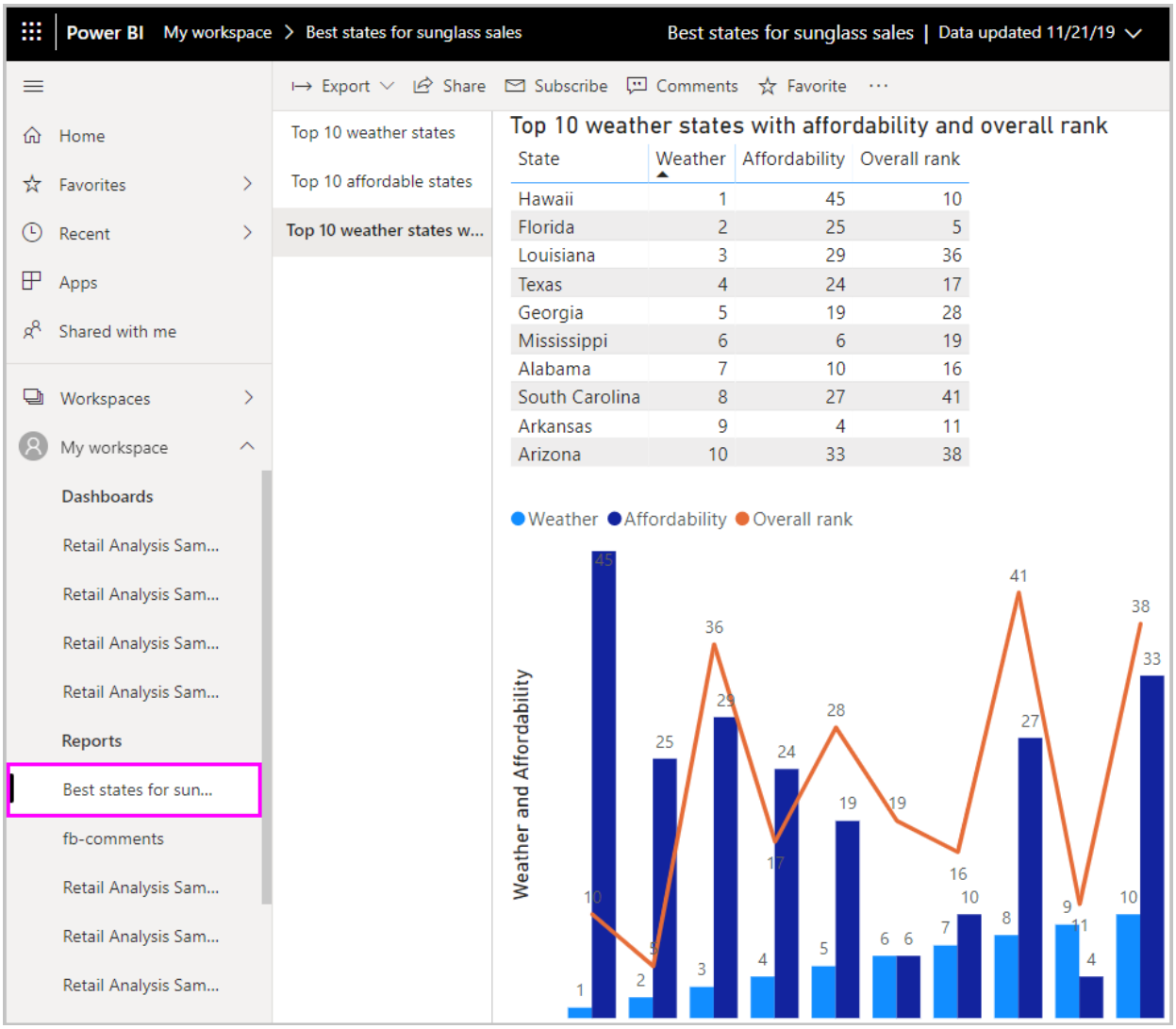


On the next page, select **Get** from the **Files** section.



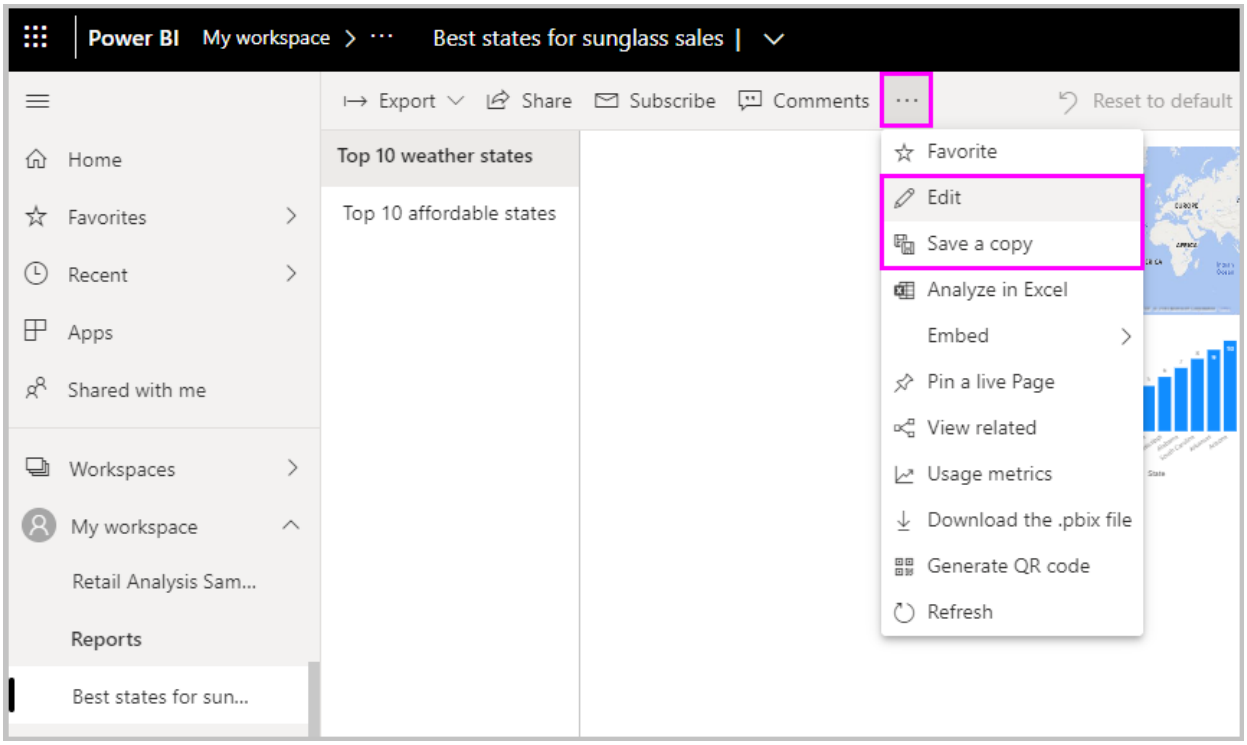
On the next page, select **Local File**. Browse to and select your Power BI Desktop *.pbix* file, and select **Open**.

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



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.

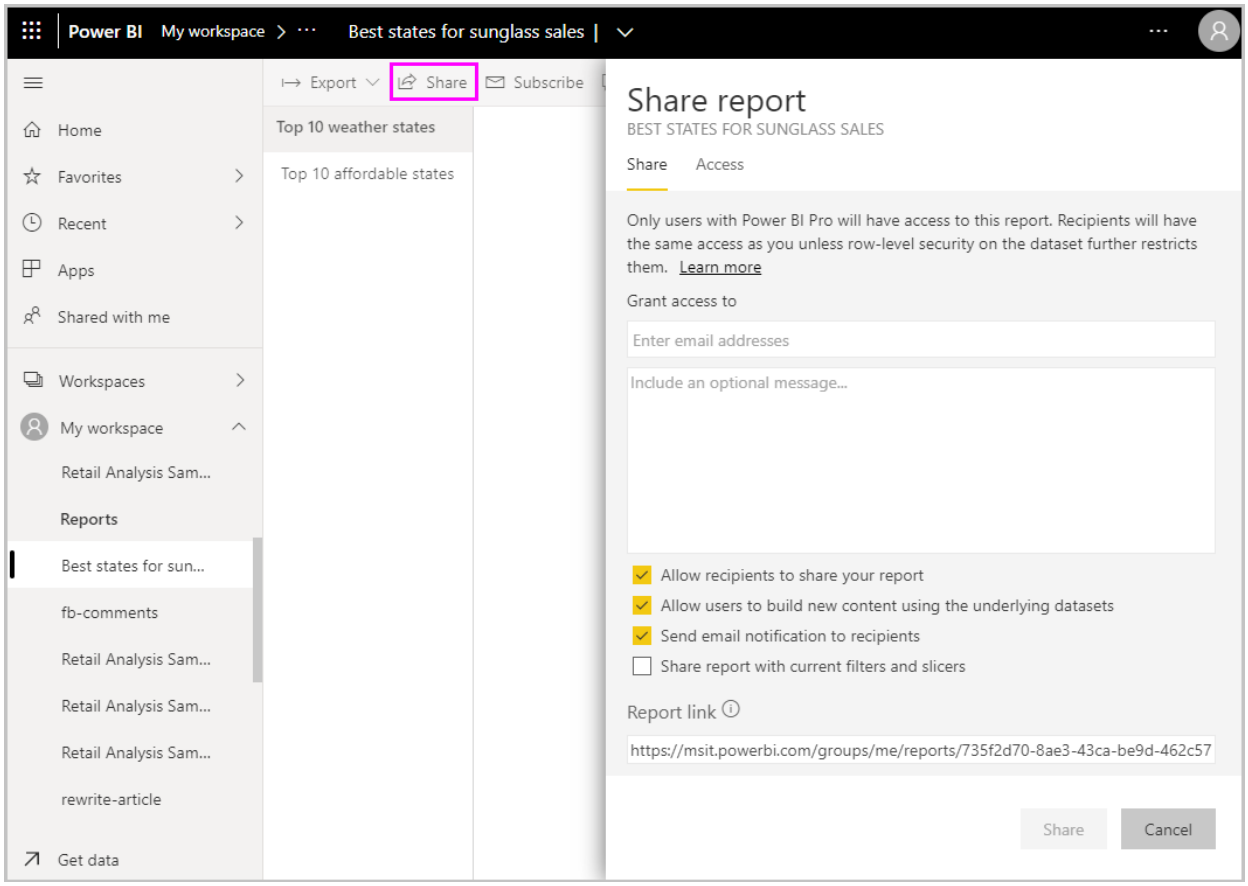
You can make changes to a report in the **Power BI** service by selecting **More options** > **Edit** from the top of the report canvas. To save your changes, select **Save a copy**.



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** 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.



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

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 using the diagnostics port, *making any changes to the model is not 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:

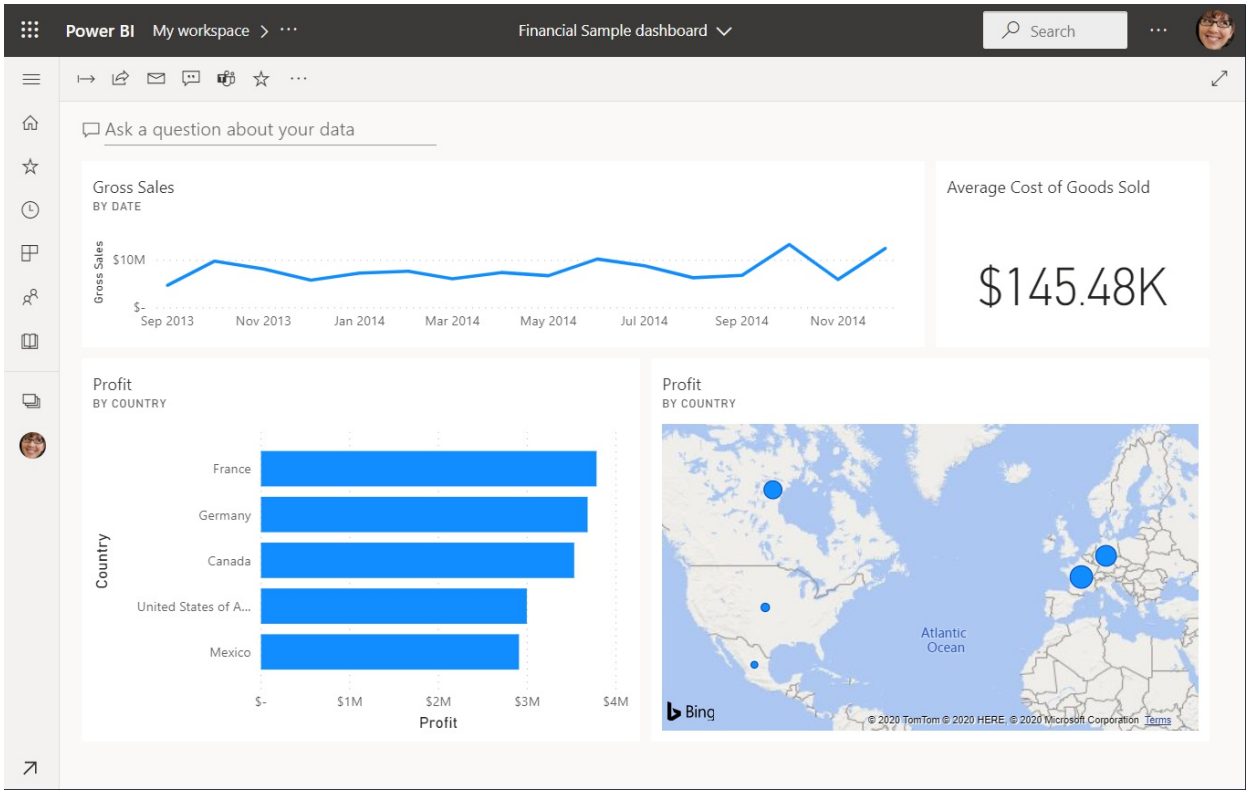
- Query overview in Power BI Desktop
- Data sources in Power BI Desktop
- Connect to data in Power BI Desktop
- Tutorial: Shape and combine data with Power BI Desktop
- Common query tasks in Power BI Desktop

Tutorial: Get started creating in the Power BI service

3/5/2021 • 6 minutes to read • Edit Online

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 license to create content in Power BI. If you don't have a Power BI account, sign up for a free Power BI Pro trial before you begin.

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) in your browser.

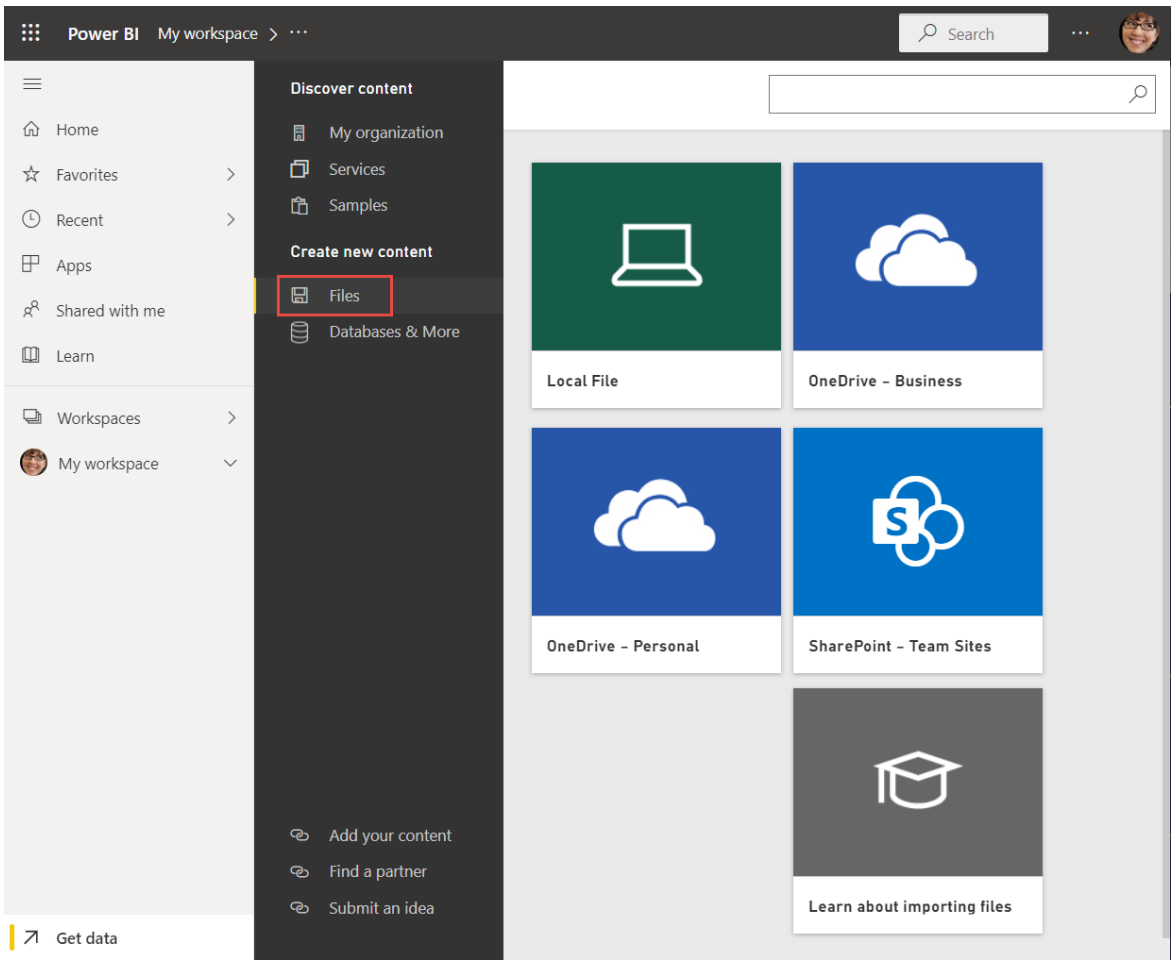
   Don't have an account? No worries, you can sign up for a free Power BI Pro trial

2. Select **My workspace** in the navigation pane.

3. In **My workspace**, select **New** > **Upload a file**.

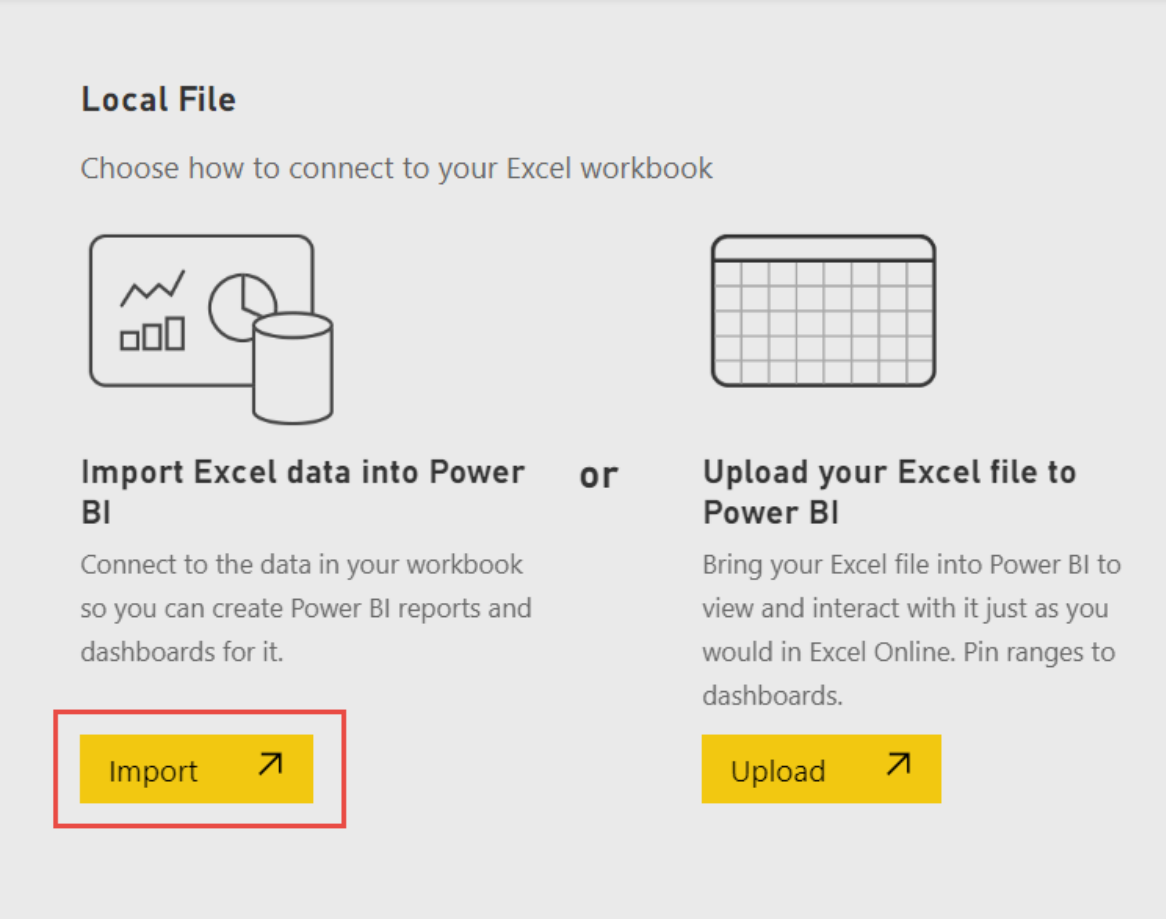
   The **Get Data** page opens.

4. Under the **Create new content** section, make sure **Files** is selected, then select the location where you saved the Excel file.



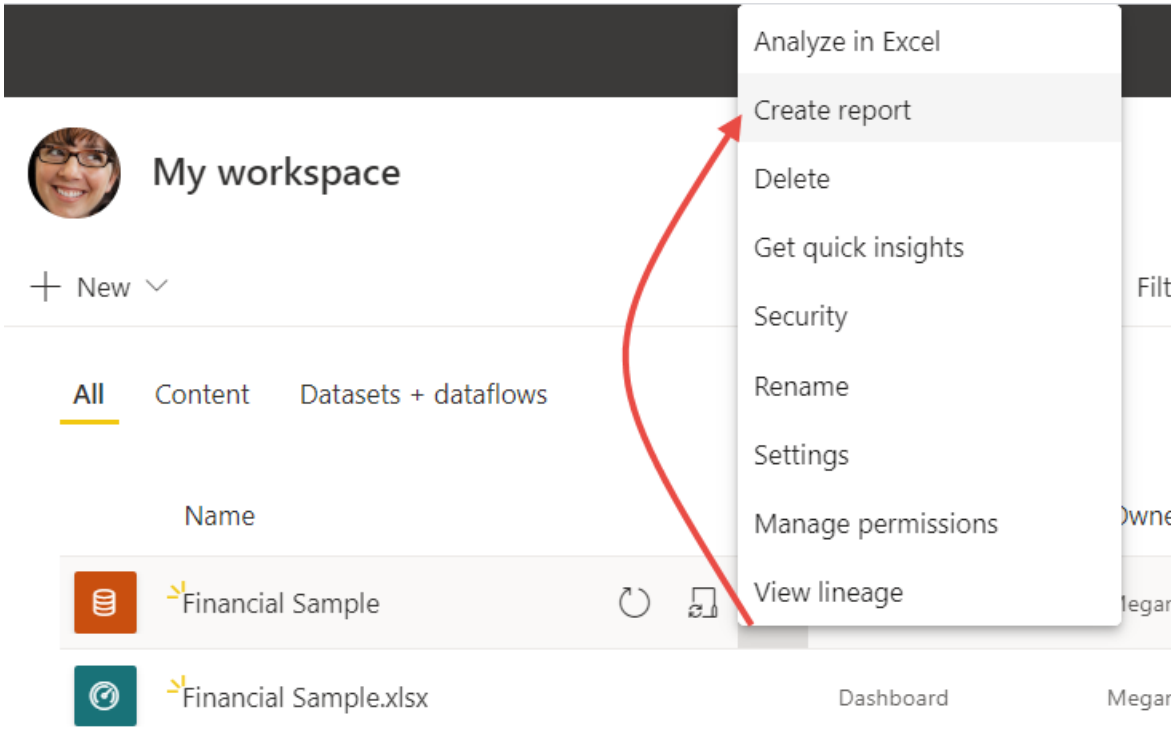
5. Browse to the file on your computer, and choose **Open**.

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.

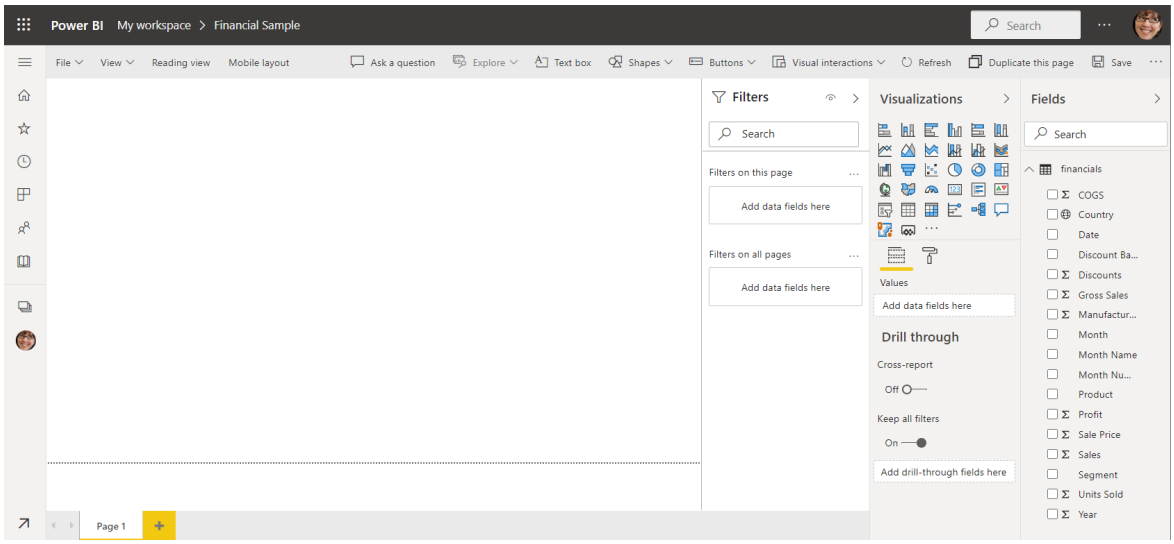


7. When your dataset is ready, select **More options (...)** next to your Financial Sample dataset, then select **Create report**.

8. open the report editor.

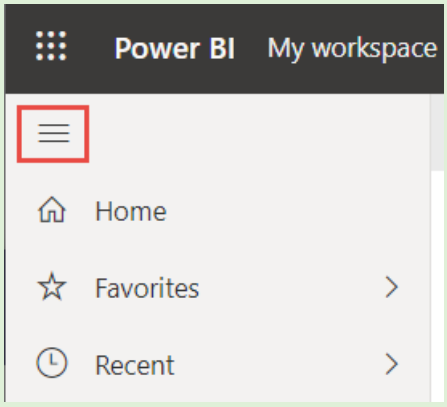


The report canvas is blank. We see the **Filters**, **Visualizations**, and **Fields** panes on the right.

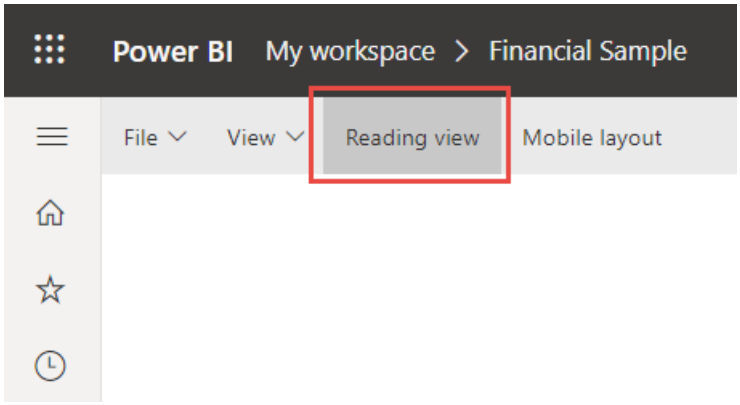


TIP

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



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

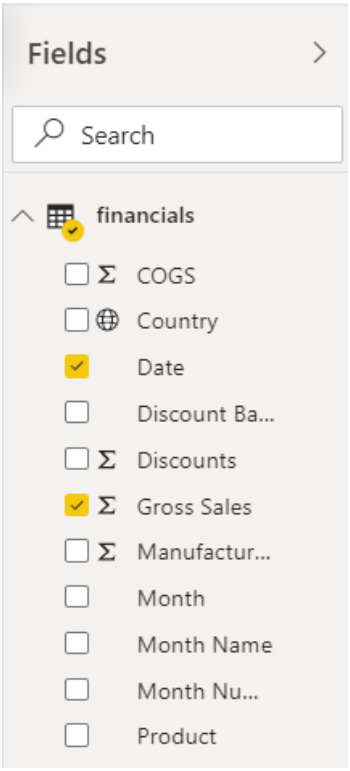


While in Editing view, you can modify reports, because you're the *owner* and *creator* of the report. When you share your report with colleagues, often they can only interact with the report in Reading view. They are *consumers* of reports in your **My workspace**.

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.

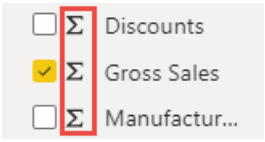
1. In the report editor, start in the **Fields** pane on the right side of the page to build a visualization. Select the **Gross Sales** field, then the **Date** field.



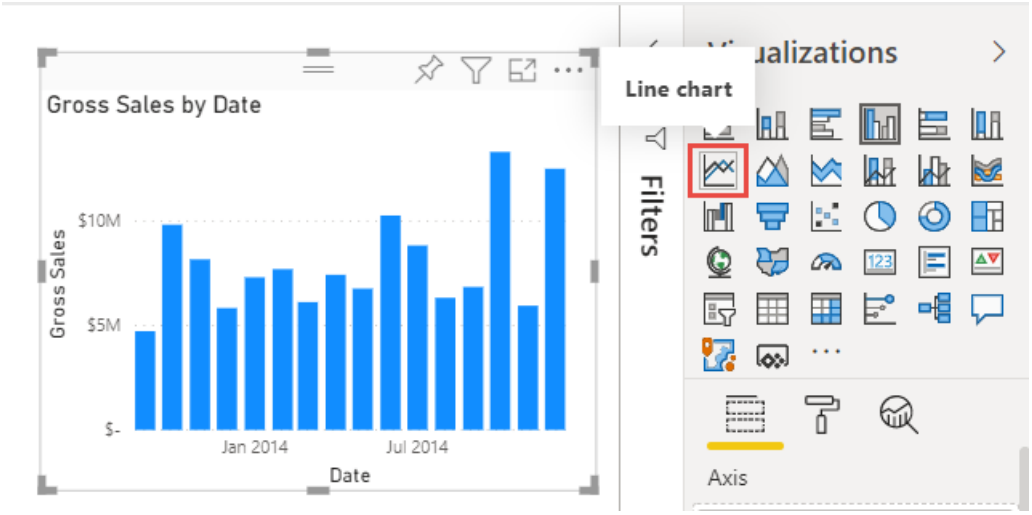
Power BI analyzes the data and creates a column chart visualization.

> **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.

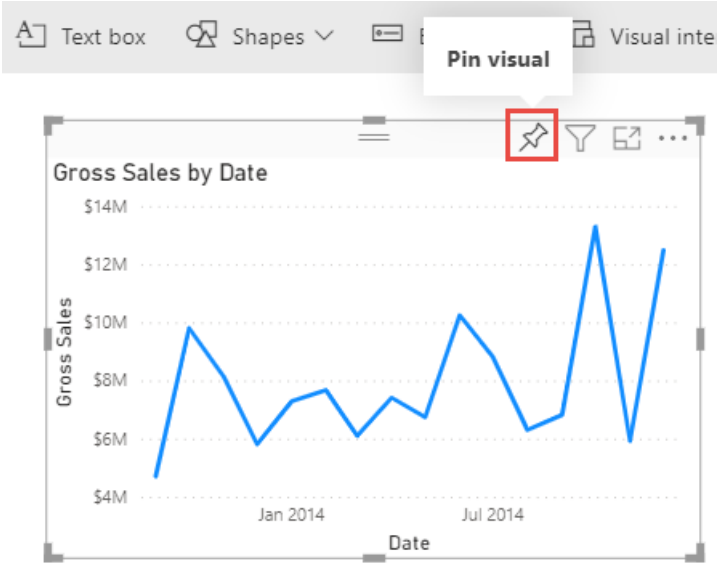
Some fields have sigma symbols next to them because Power BI detected that they contain numeric values.



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.



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

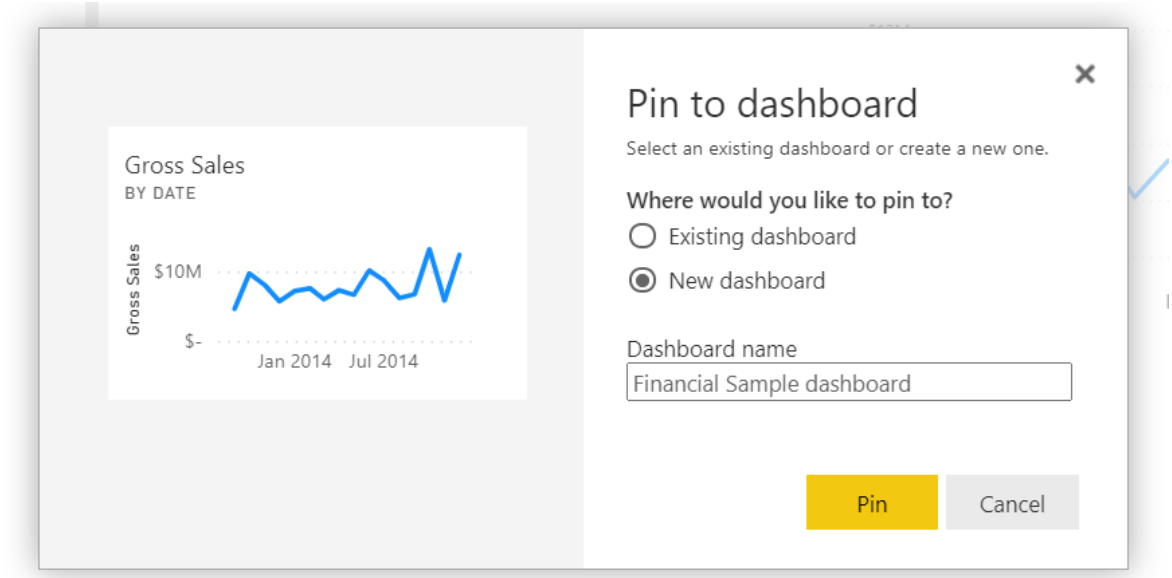


4. Because this report is new, you're prompted to save it before you can pin a visualization to a dashboard. Give your report a name (for example, *Financial Sample report*), then **Save**.

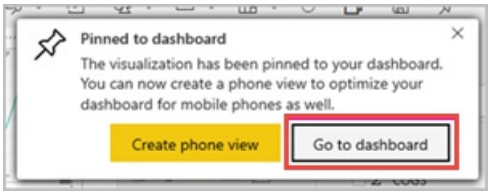
   Now you're looking at the report in Reading view.

5. Select the **Pin** icon again.

6. Select **New dashboard** and name it *Financial Sample dashboard*, for example.

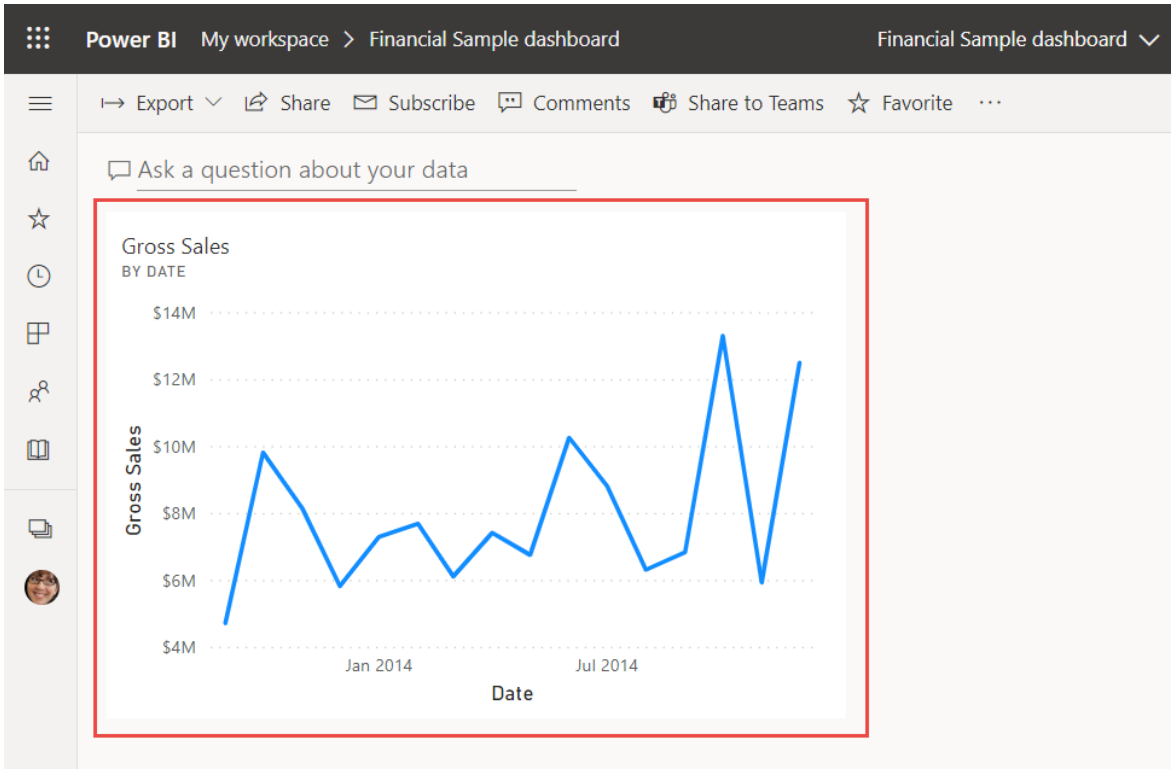


   A success message (near the top-right corner) lets you know the visualization was added as a tile to your dashboard.

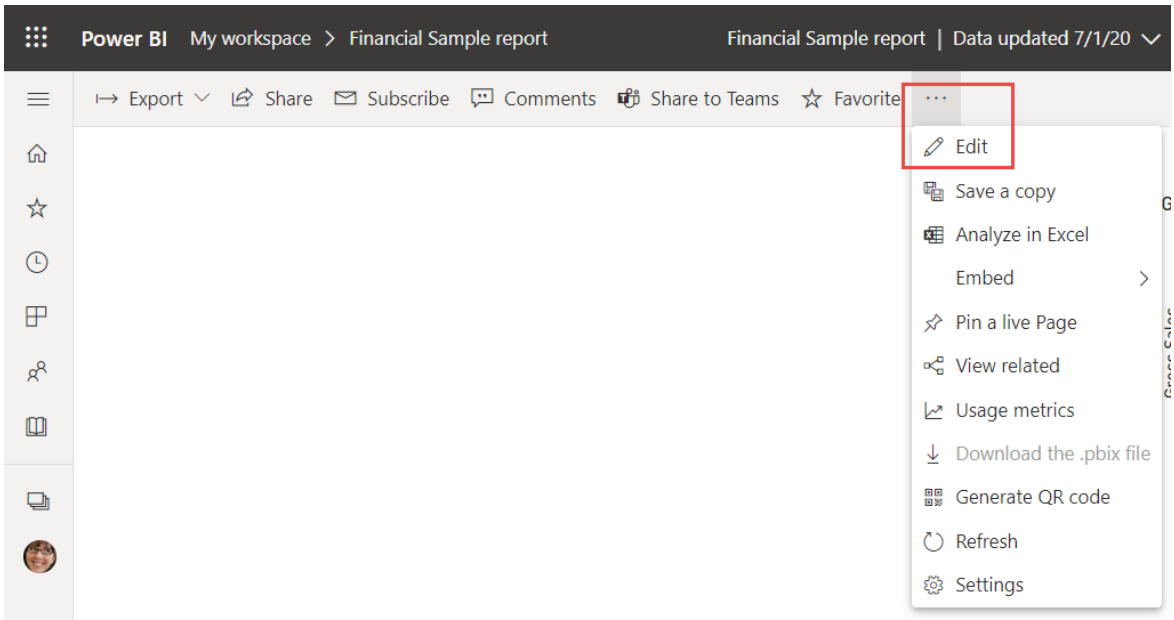


   Now that you've pinned this visualization, it's stored on your dashboard. The data stays up-to-date so you can track the latest value at a glance. However, if you change the visualization type in the report, the visualization on the dashboard doesn't change.

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



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**.

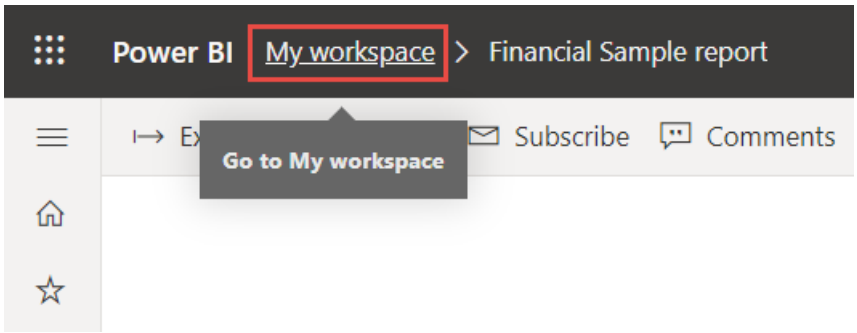


Back in Editing view, you can continue to explore and pin tiles.

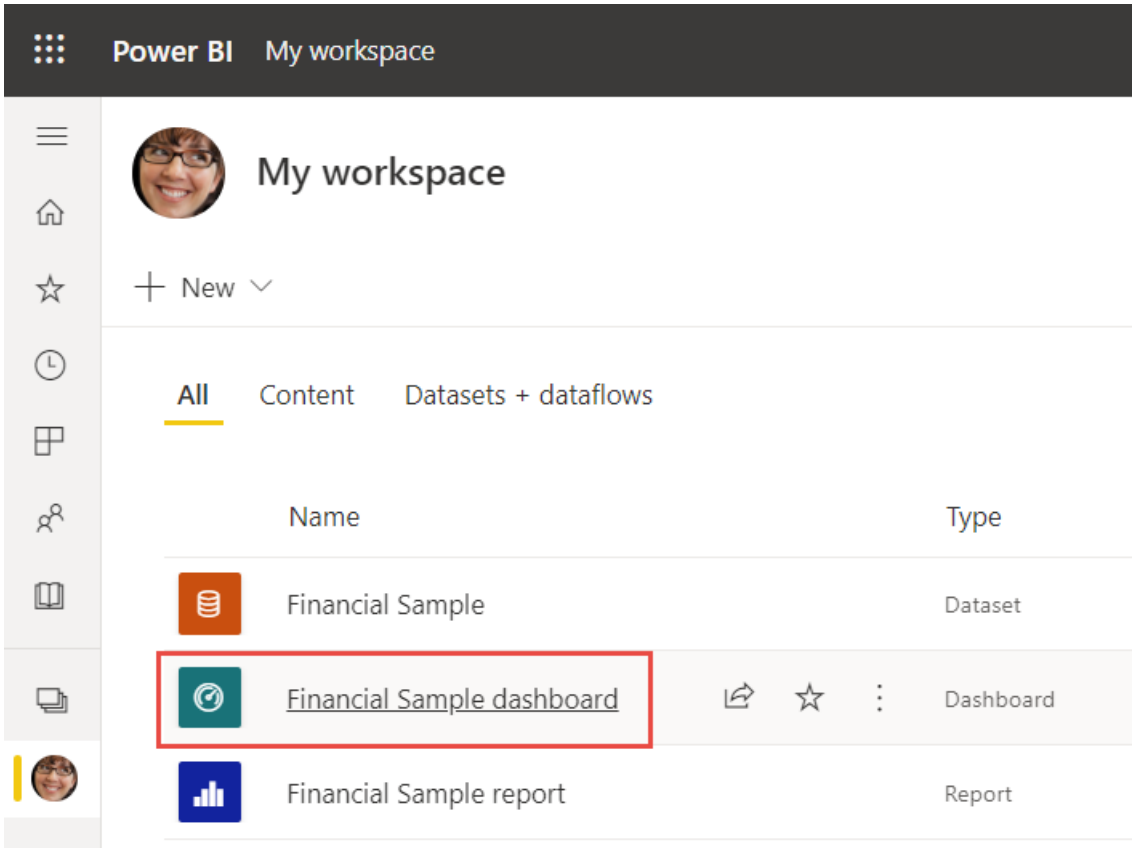
Step 3: Explore with Q&A

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**).

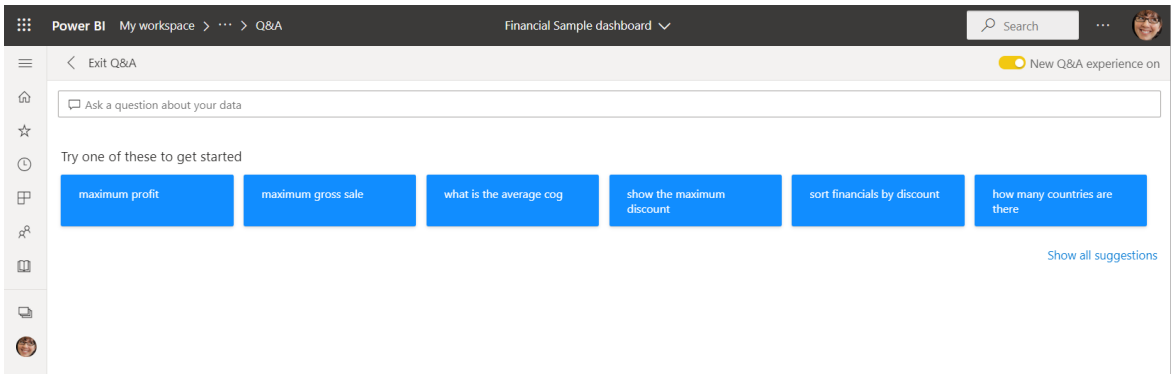
1. To go back to the dashboard, select **My workspace** in the black **Power BI** header bar.



2. In **My workspace**, select your dashboard.

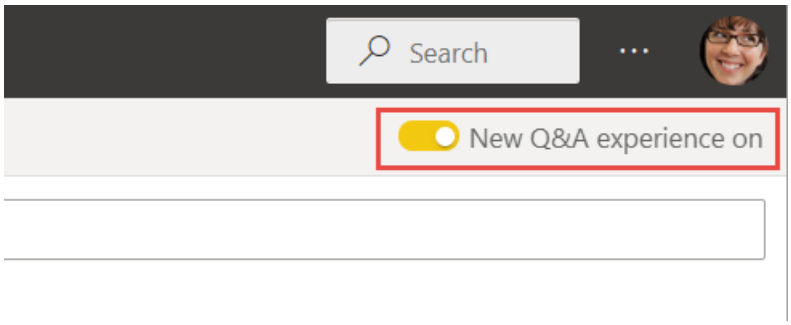


3. Select **Ask a question about your data**. Q&A automatically offers a number of suggestions.



NOTE

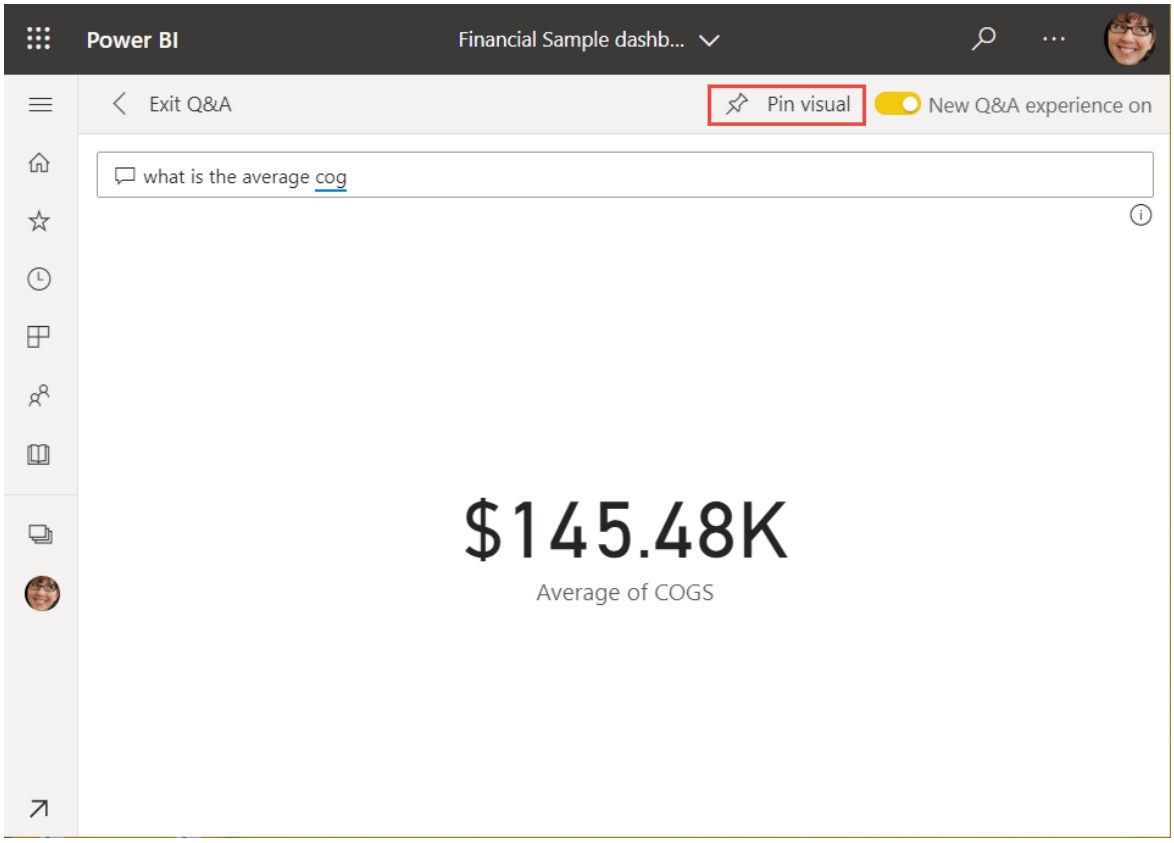
If you don't see the suggestions, turn on **New Q&A experience**.



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

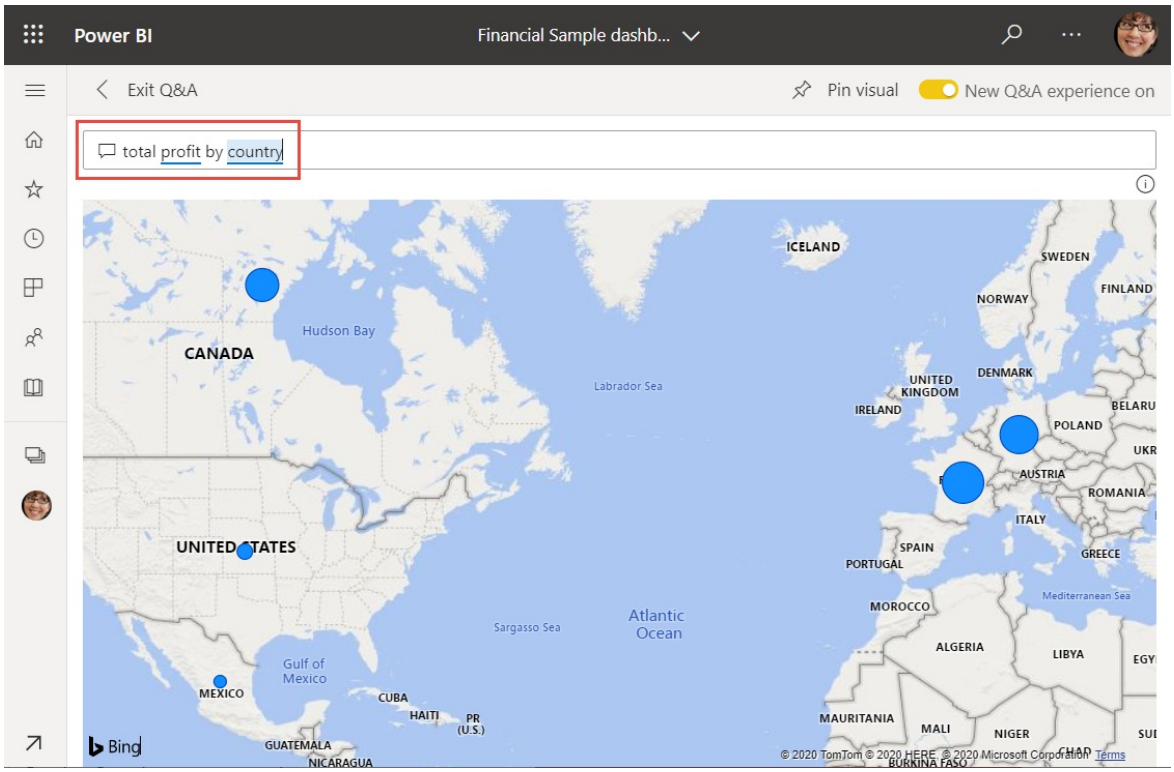
   Q&A searches for an answer and presents it in the form of a *card* visualization.

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

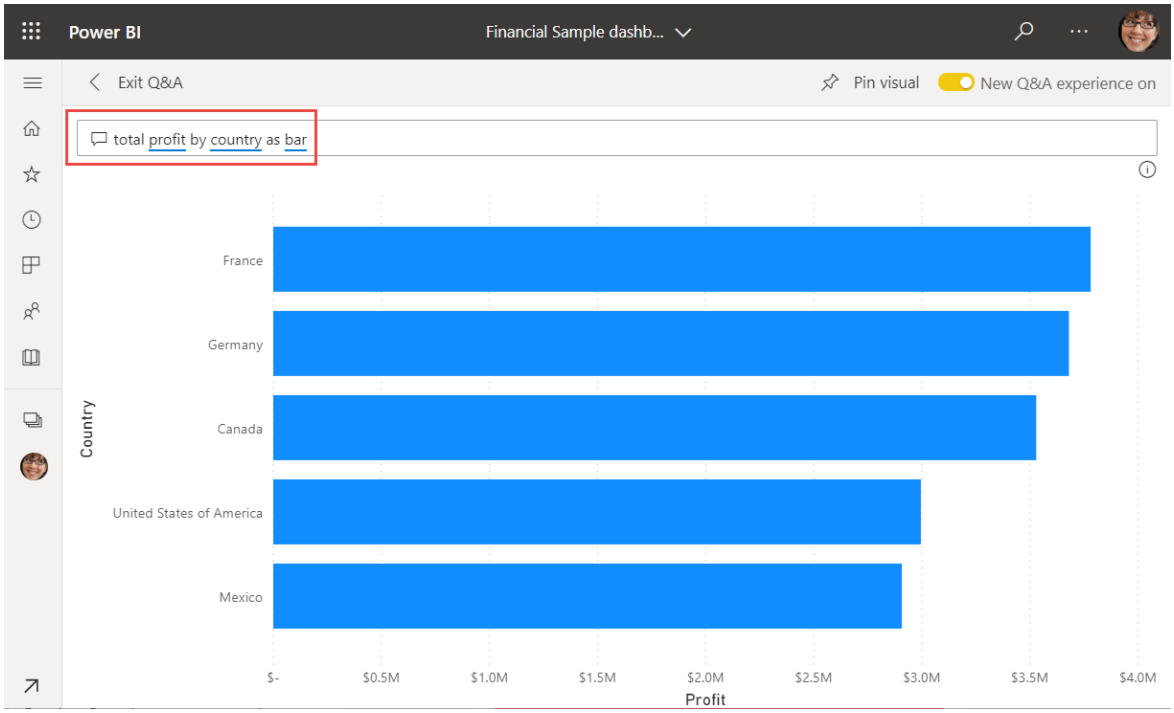


6. Go back to Q&A and select **Show all suggestions**.

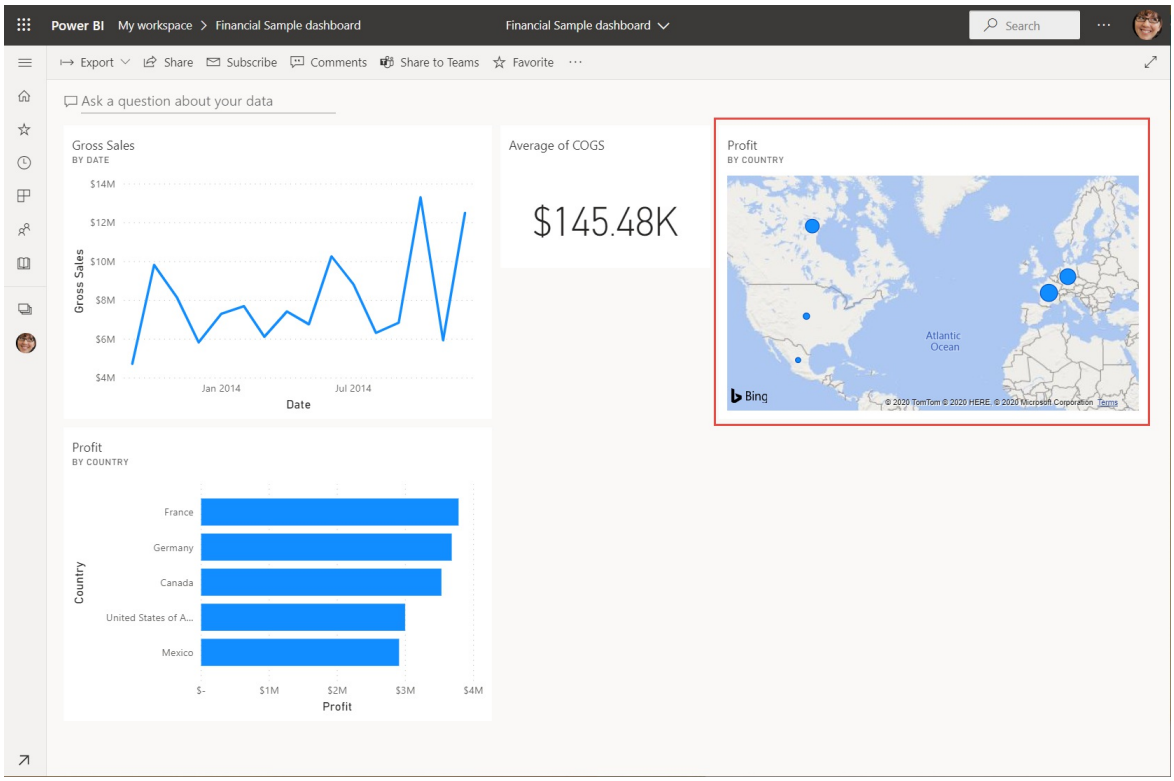
7. Select **total profit by country**.



8. Pin the map to the Financial Sample dashboard, too.
9. On the dashboard, select the map you just pinned. See how it opens Q&A again?
10. Place the cursor after *by country* in the Q&A box and type *as bar*. Power BI creates a bar chart with the results.



11. Pin the bar chart to your Financial Sample dashboard, too.
12. 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.

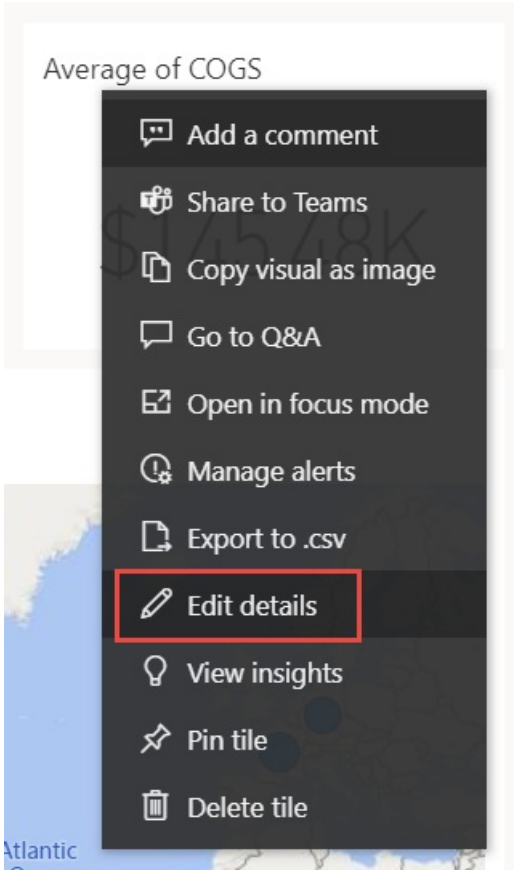
Step 4: Reposition tiles

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

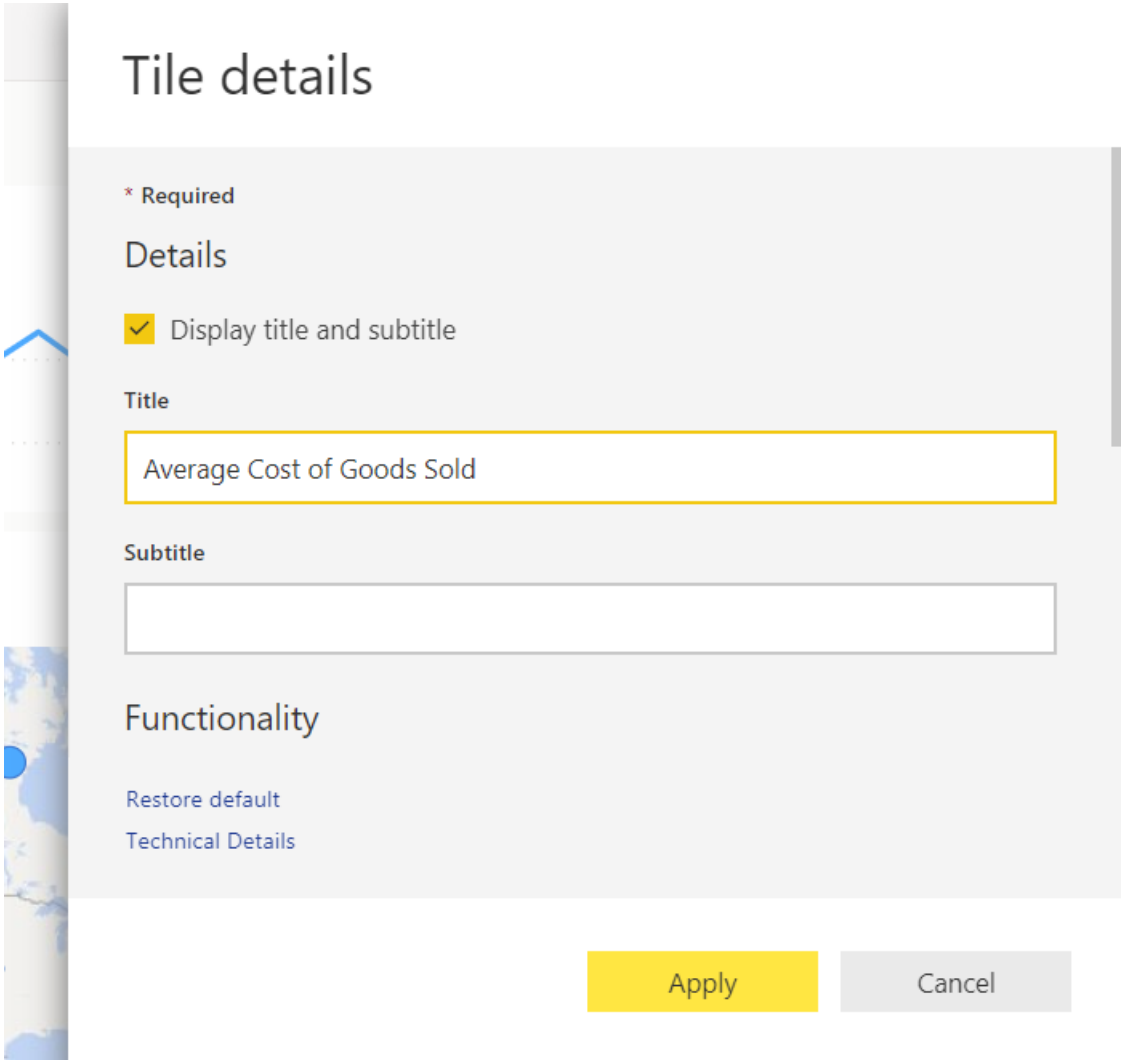
1. Drag the lower-right corner of the *Gross Sales* line chart tile upward, until it snaps at the same height as the Sales tile, then release it.

Now the two tiles are the same height.

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

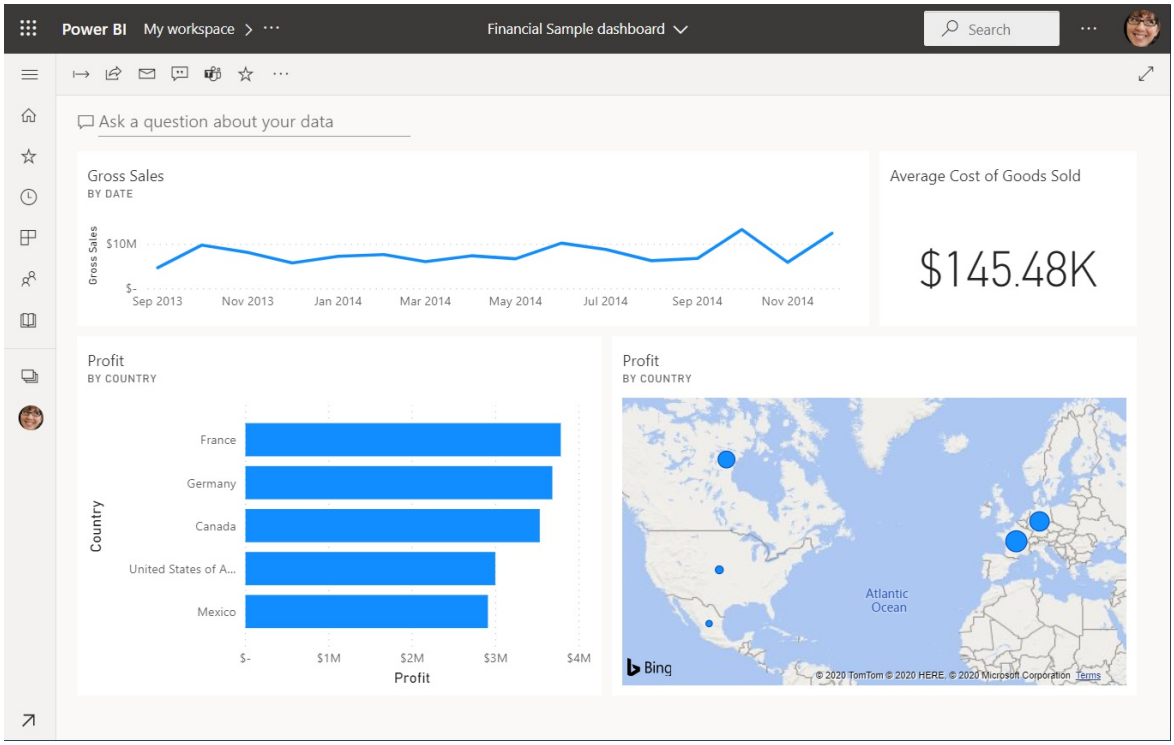


3. In the **Title** box, type *Average Cost of Goods Sold* > **Apply**.



4. Rearrange the other visuals to fit together.

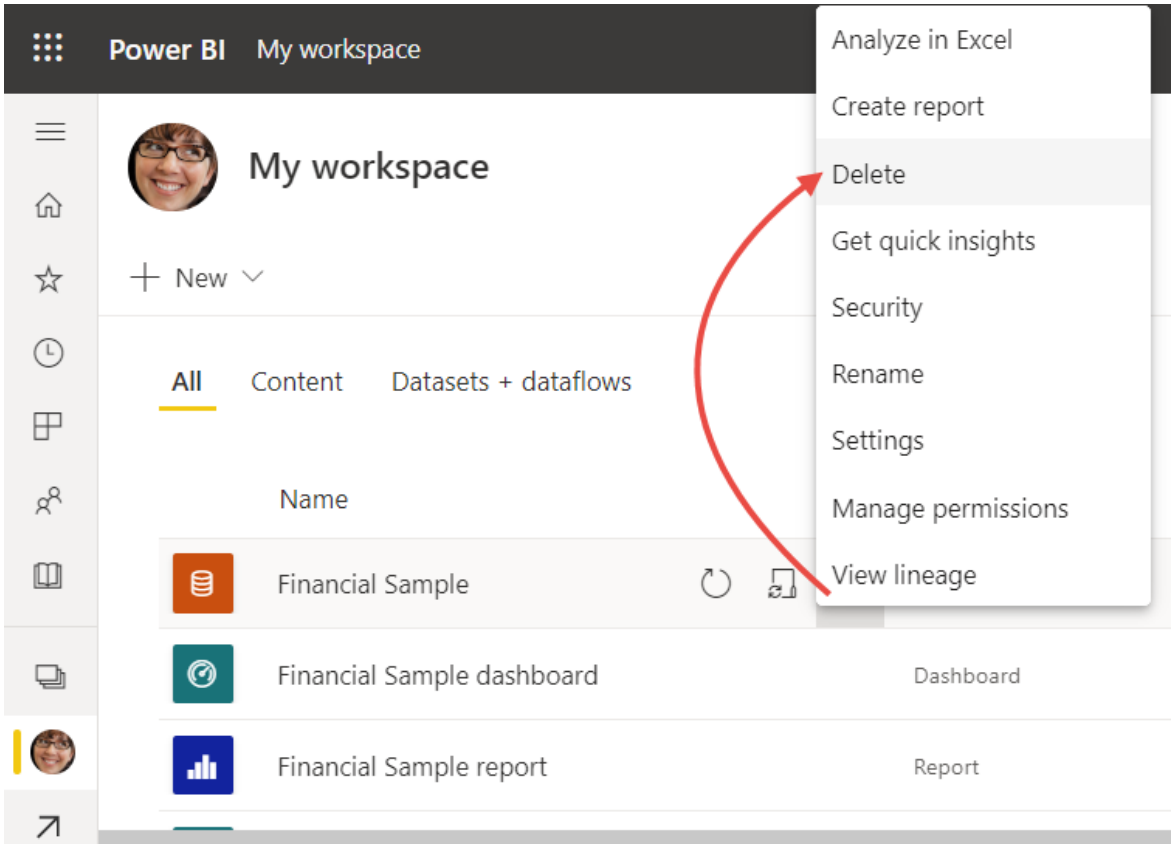
That looks better.



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**.



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 collections of Microsoft Learn content for Power BI:

- Learn Power BI
- Become a Power BI data analyst

What's new in Power BI?

3/18/2021 • 3 minutes to read • Edit Online

March 2021 Update (2.91.383.0)

We feel lucky like a four-leaf clover to be delivering 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:

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 for Power BI: a sequential learning tour of Power BI, in bite-size pieces.

Updates for previous months

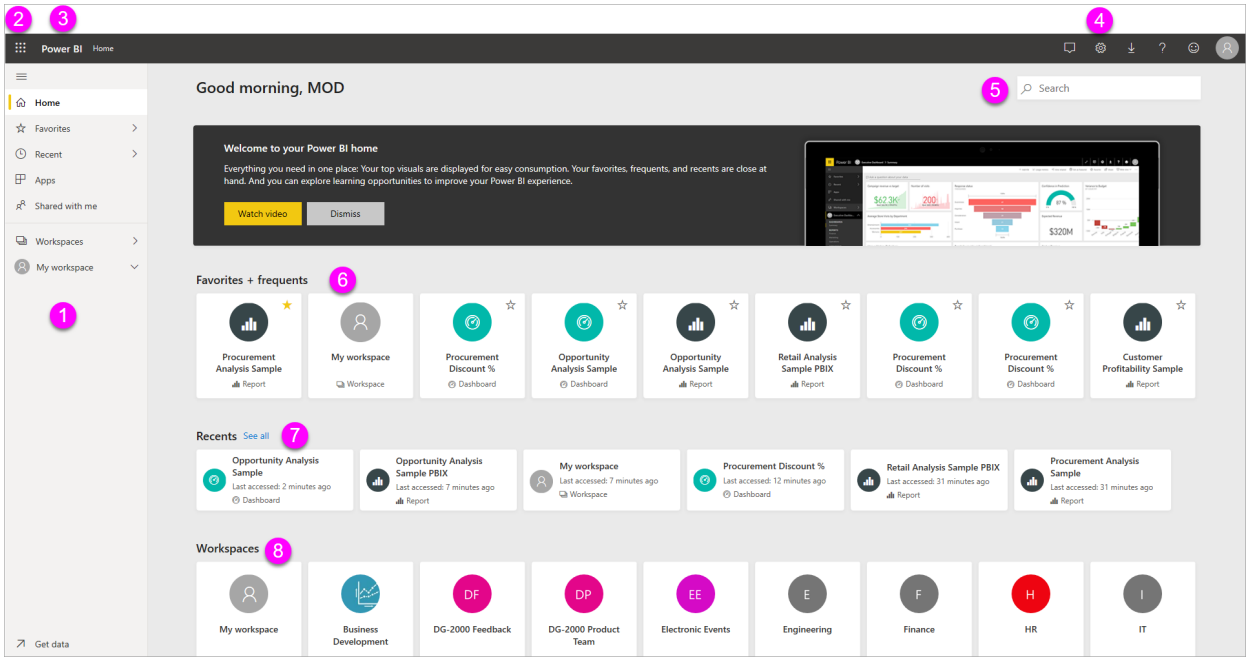
Looking for Power BI updates for previous months? You can find them in the Power BI monthly updates archive.

Basic concepts for designers in the Power BI service

3/18/2021 • 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. Favorite and frequent dashboards, reports, and workspaces
7. Recent dashboards, reports, and workspaces
8. Your workspaces

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.

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 *dedicated*. A shared capacity is shared with other Microsoft customers, while a dedicated capacity is fully committed to a single customer. Dedicated capacities require a subscription, and are fully described in the Managing Premium 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, all workspace members need Power BI Pro licenses. Read more about the new 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 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,

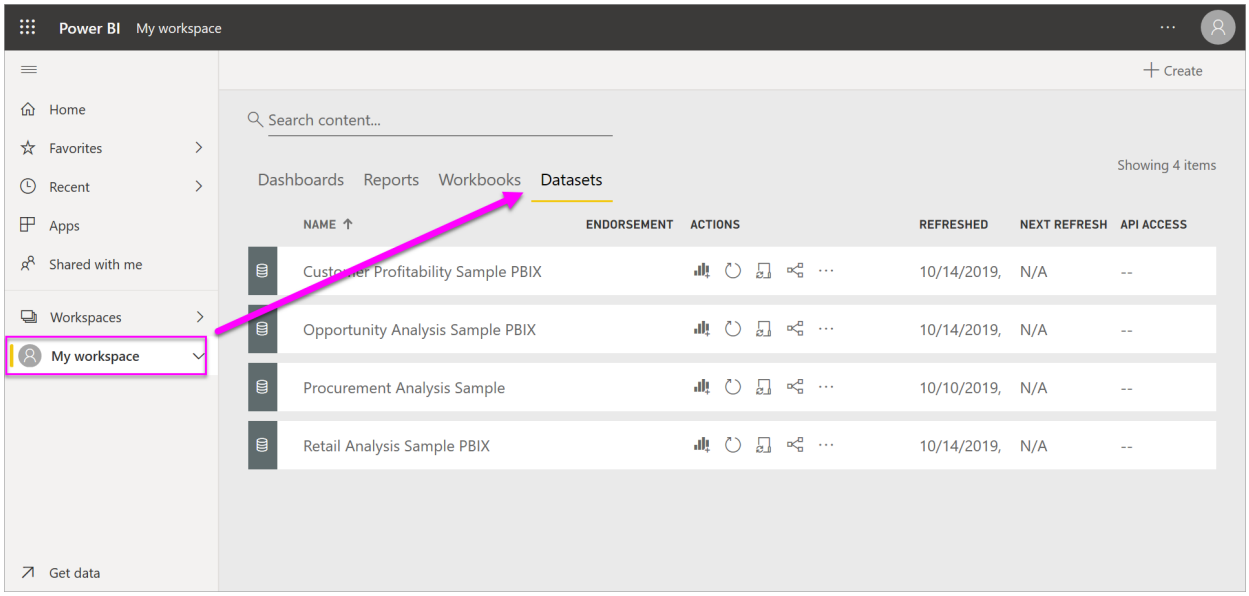
but they're not useful until they have data), so let's now introduce **datasets**.

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.

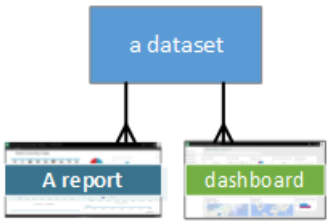
Datasets are associated with *workspaces* and a single dataset can be part of many workspaces. When you open a workspace, the associated datasets are listed under the **Datasets** tab. Each listed dataset represents a single source of data, for example, an Excel workbook on OneDrive, or an on-premises 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 the "Sales and marketing" workspace and clicked the tab for **Datasets**.



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 Excel workbook that contains Power View sheets, Power BI creates a report based on those sheets. And when you connect to an SaaS application, Power BI imports a pre-built report.

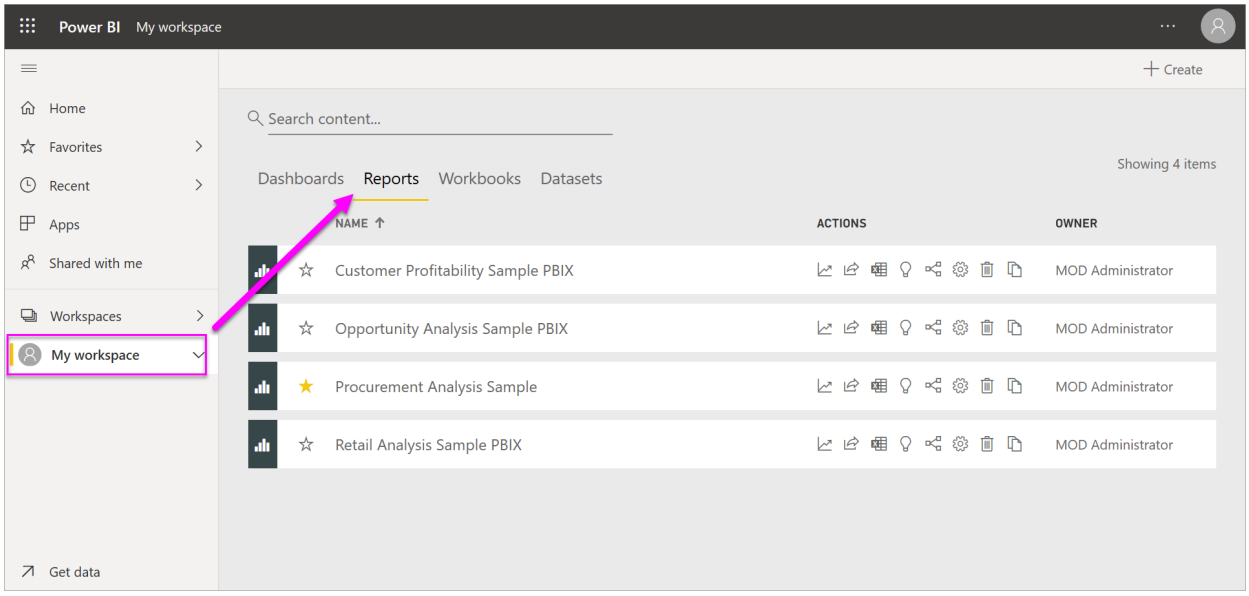
There are two modes to view and interact with reports: *Reading view* and *Editing view*. When you open a report, it opens in Reading view. If you have edit permissions, then you see **Edit report** in the upper-left corner, and you can view the report in Editing view. If a report is in a workspace, 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 **Reports** 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.

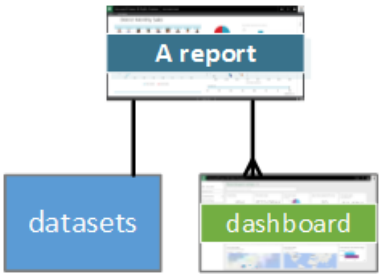
By default, the report opens in Reading view. Just select **Edit report** to open it in Editing view (if you have the necessary permissions).

In the example below, I selected the "Sales and marketing" workspace and clicked the tab for **Reports**.



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:

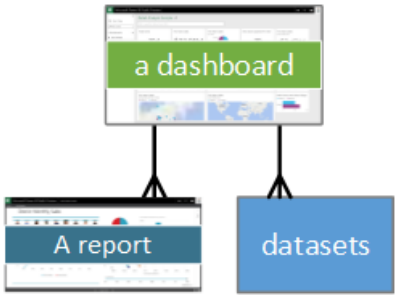
- to see, in one glance, all the information needed to make decisions.
- to monitor the most-important information about your business.
- to ensure all colleagues are on the same page, viewing and using the same information.
- to monitor the health of a business or product or business unit or marketing 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 **Dashboards** 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.

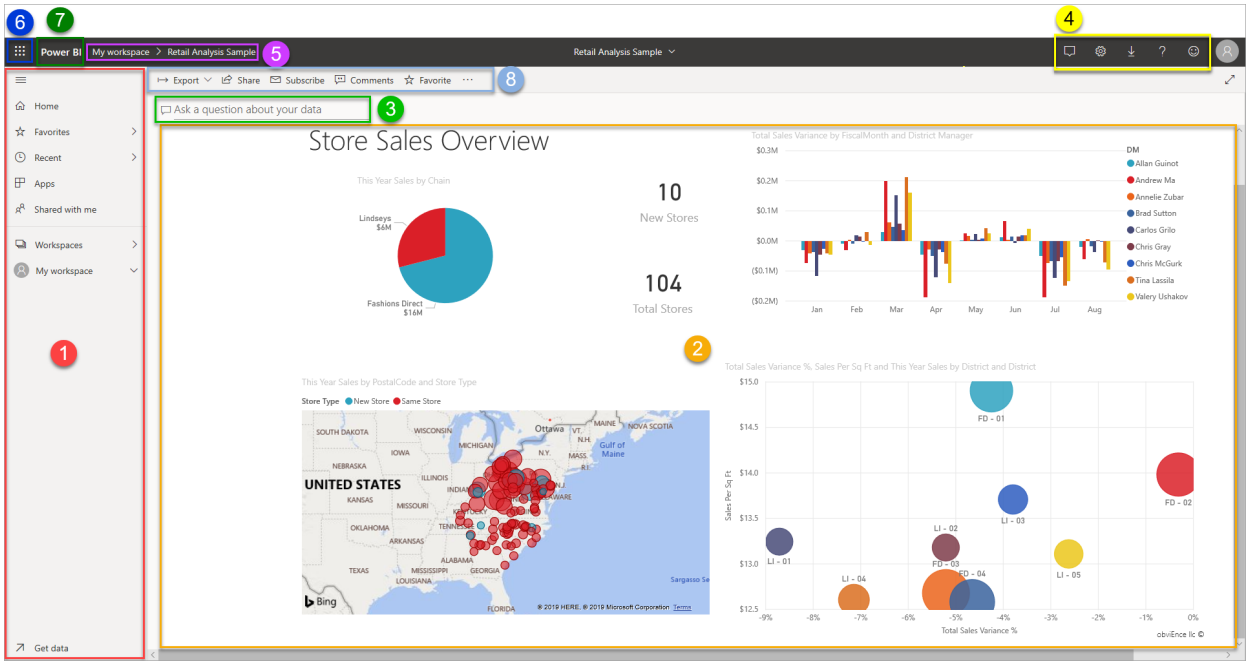
You can't edit your workbook in Power BI. But if you need to make some changes, you can click Edit, and then choose to edit your workbook in Excel Online or open it in Excel on your computer. Any changes you make are saved to the workbook on OneDrive.

Dig deeper

- Get data from Excel workbook files
- Publish to Power BI from Excel

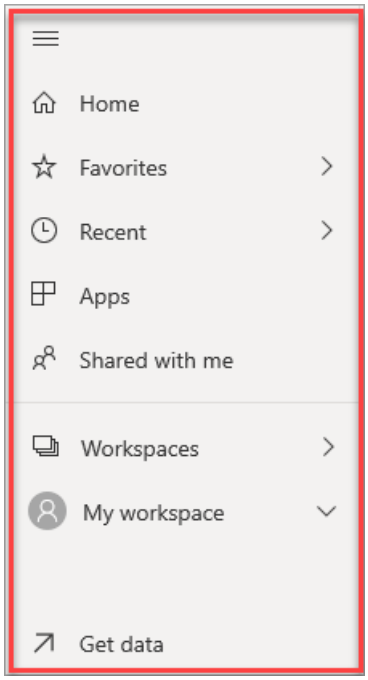
A dashboard in My Workspace

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

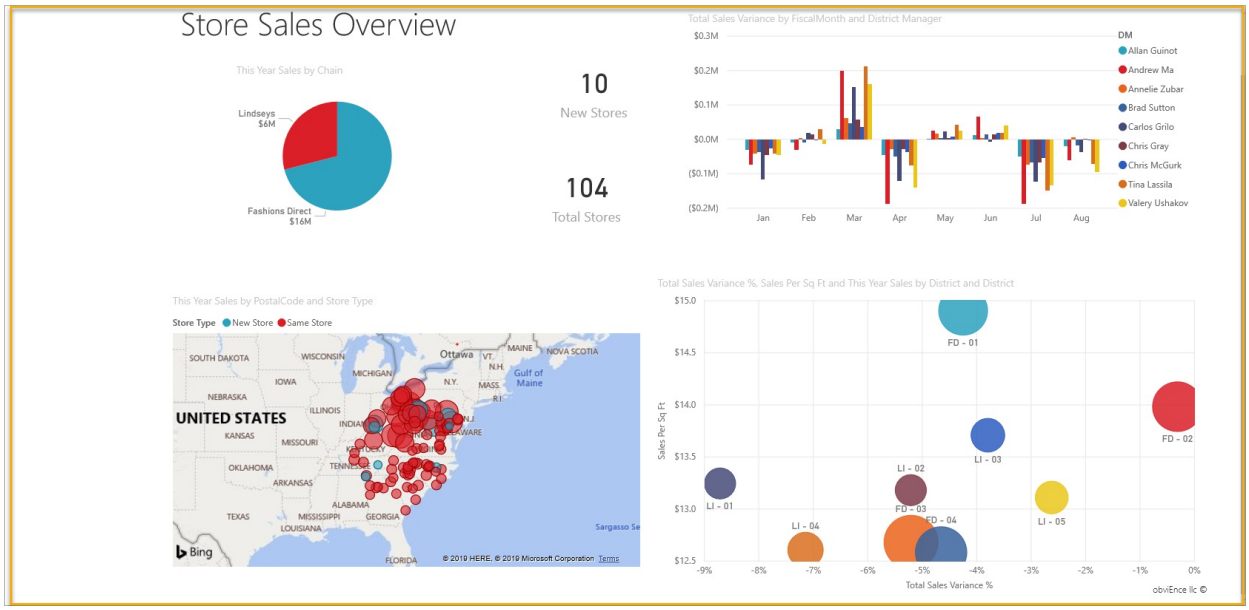
Single-click these elements:

- 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*.

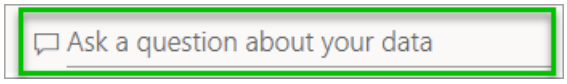


For more information, see Dashboards (above).

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.

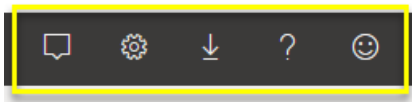
Q&A looks for an answer in the dataset(s) connected to the dashboard. A connected dataset is one that has at least one tile pinned to that dashboard.



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 (navigation path, or breadcrumbs)

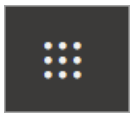
It's not always easy to figure out which workspace and dashboard are active, so Power BI creates a navigation path for you. In this example, we see the workspace (My workspace) and the dashboard title (Retail Analysis Sample). If we opened a report, the name of the report would be appended to the end of the navigation path. Each section of the path is an active hyperlink.

Notice the "C" icon after the dashboard title. This dashboard has a data classification tag of "confidential." The tag identifies the sensitivity and security level of the data. If your Admin has turned on data classification, every dashboard will have a default tag set. Dashboard owners should change the tag to match their dashboard's proper security level.

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.

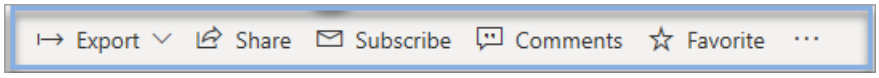


7. Power BI home

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 (...)** reveals options for duplicating, printing, refreshing the dashboard 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

3/5/2021 • 3 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 -- i.e. "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 and training. You can find great content including recordings of webinars, white papers, guided learning, 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 see what's new: Take a few minutes each week to scan the blogs. 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 #powerbihelp so the people who know will 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 Analyze and Visualize data with Power BI playlist.
- Then try the Power BI channel for a much bigger selection.
- If you have more experience with Power BI, the Guy in a Cube YouTube channel might be a better fit for you.

6 Attend training

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

*Microsoft Learn 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 free course, Analyzing and Visualizing Data with Power BI.

- **Lynda.com** offers has courses such as Power BI Pro 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. 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 going into the Power BI service or Power BI Desktop, looking at the options in the user interface, and then trying to use them.

For example, say you're wondering if you can share dashboards with a security group. To answer that question, go to the sharing dialog box and try adding a security group. Either way, you'll have your answer after this test.

Next steps

- What is Power BI?
- Try asking the Power BI Community
- Still have an issue? Please visit the Power BI support page

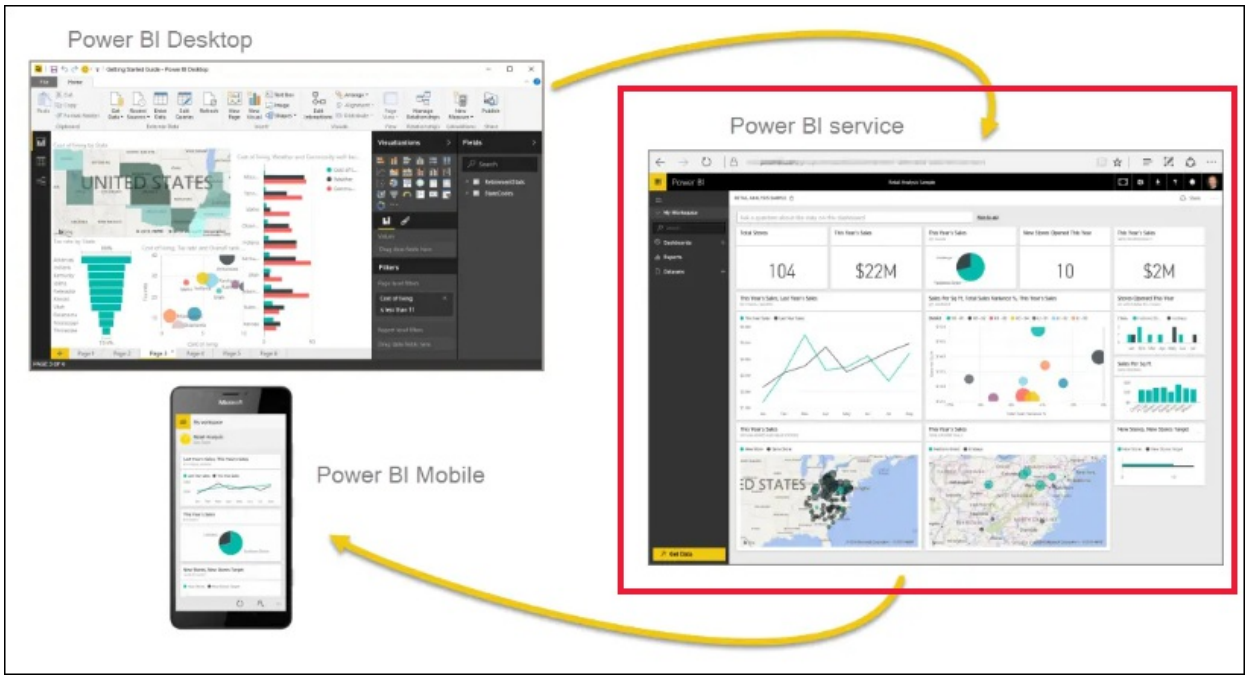
Sign up for the Power BI service as an individual

3/5/2021 • 7 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 to sign up for Power BI as an individual. If you're a global administrator or billing administrator, see Power BI licensing for your organization.

What is Power BI?

Power BI is a unified self-service and enterprise business intelligence platform that combines an intuitive user experience with intelligent data visualizations to provide greater depth of data insight. Reports can be shared within Microsoft tools like Teams, SharePoint, PowerPoint, or within other productivity products. It is offered as an online SaaS (Software as a Service) offering with two companion applications: a Microsoft Windows desktop application called Power BI Desktop for creating reports and native mobile BI apps for consuming reports on iOS and Android devices.



These three elements—Desktop, the service, and the mobile apps—are designed to let people create, share, and consume business insights in the way that serves them, or their role, most effectively.

Signing up for the Power BI service

This article describes the steps to sign up for **the Power BI service** as an individual. 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 also a totally free download)
- Power BI mobile apps (also a totally free download)

Supported email addresses

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

- Power BI requires that you use a work or school email address to sign up. You can't sign up 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 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.

Sign up for the Power BI service

Follow these steps to sign up for a Power BI 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 Pro trial. For more information, see Power BI features by license type.

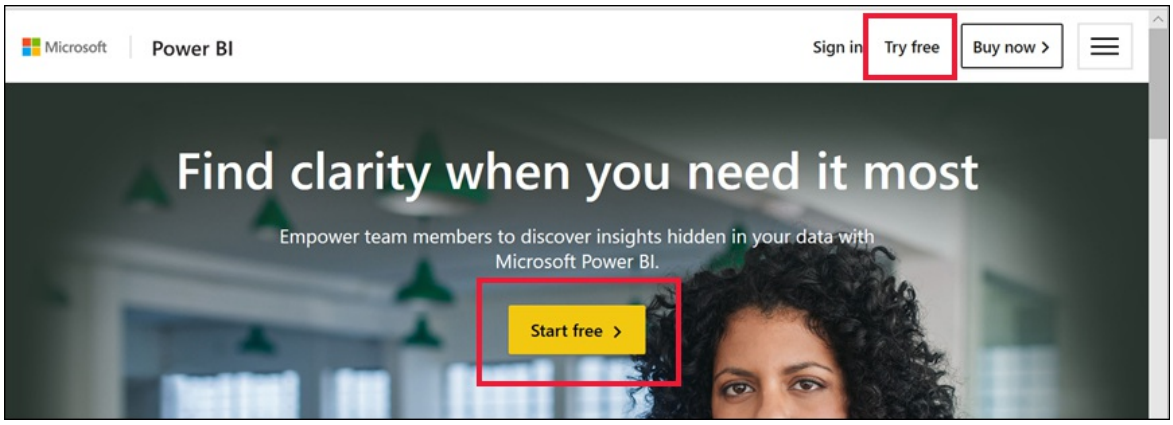
The exact steps for sign up can vary depending on your organization and what you click to start the process. For this reason, you may not be presented with all of the screens shown below. There are many different ways to sign up for the Power BI service as an individual, and the steps in this article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

- you select a **Try free** or **Start free** button[1].
- 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.

[1]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 **Start free** or **Try free** from powerbi.microsoft.com. You may have to select a button twice.

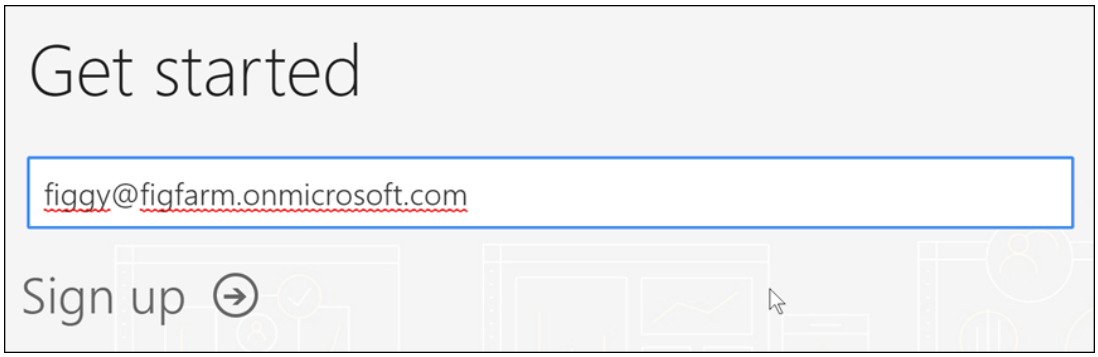


- Or, select an email link to a Power BI dashboard, report, or app.

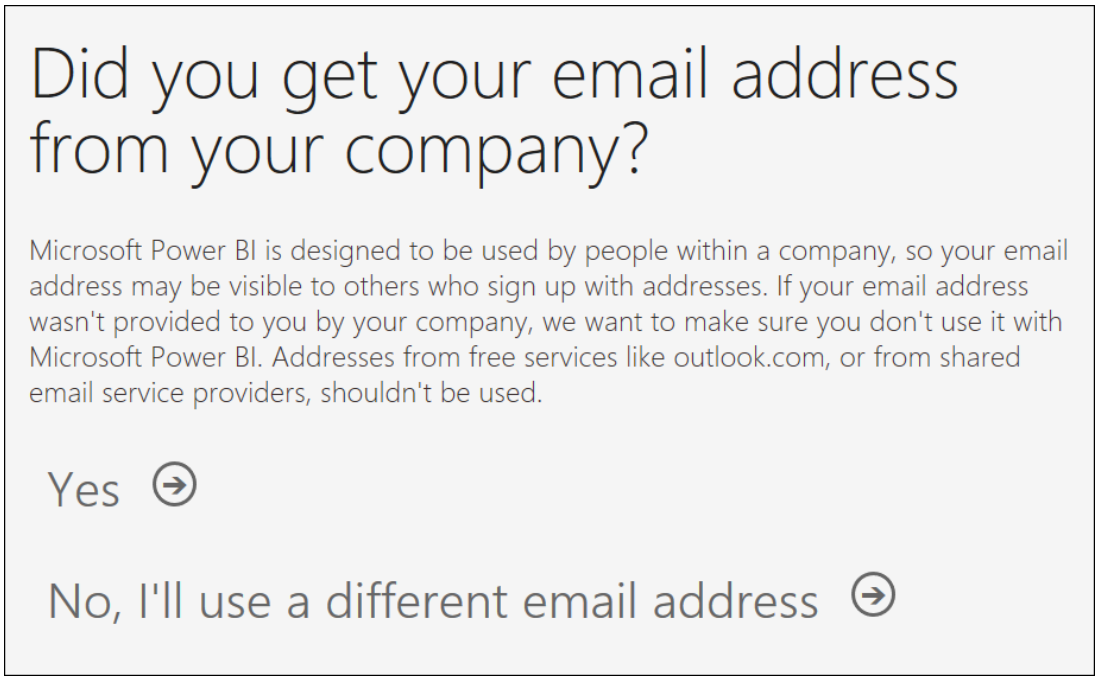
1. Microsoft 365 recognizes you and knows that you already have a Microsoft service installed. Select **Sign in**.

2. You may receive one of these dialog boxes.

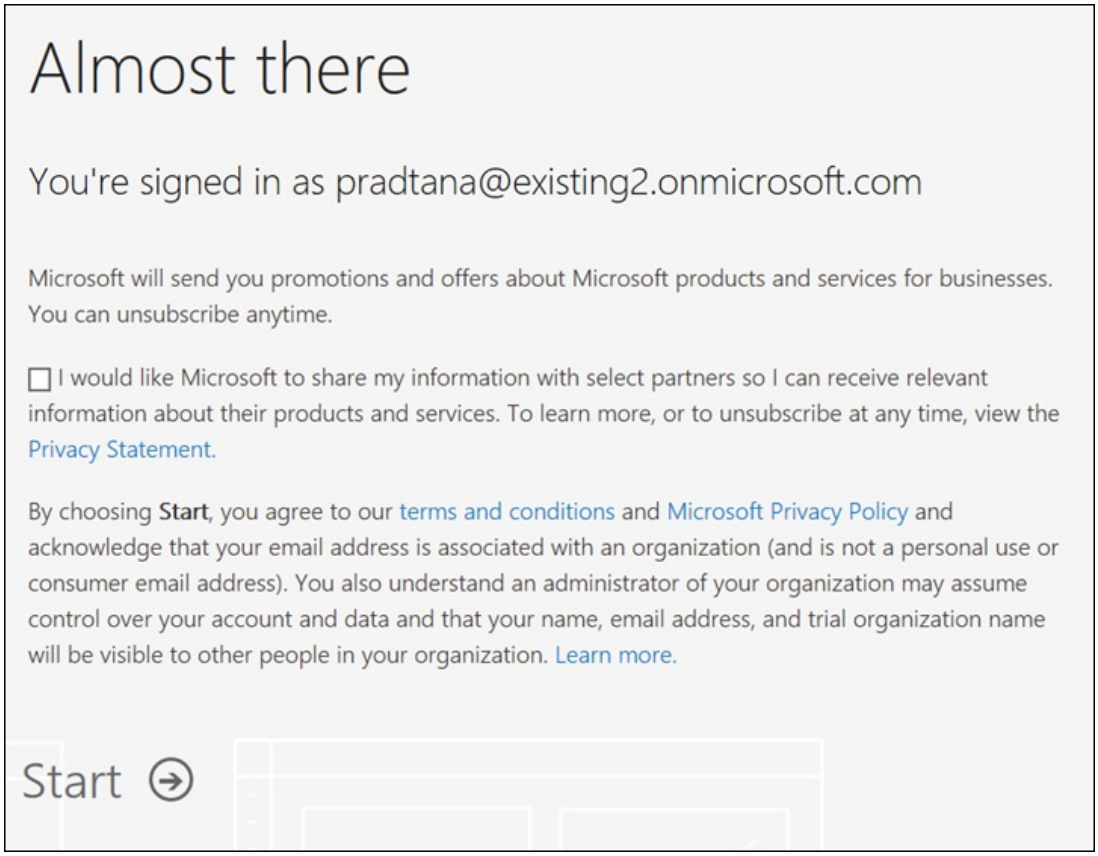
   - If you're prompted, sign in using your organizational account.



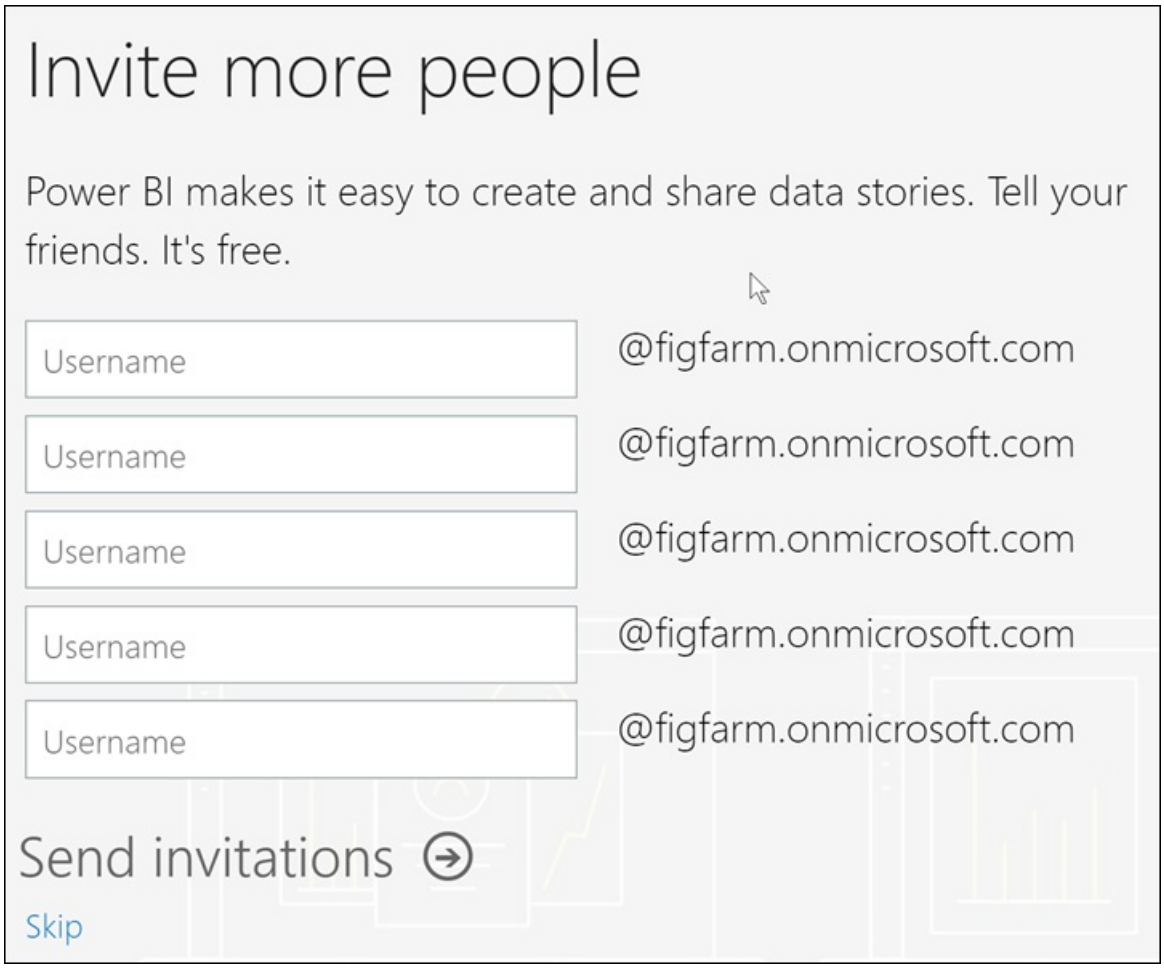
   - If you get a message like this, make sure that you are using a work or school email address and not a consumer address like hotmail, gmail, or outlook. See supported email addresses, above.



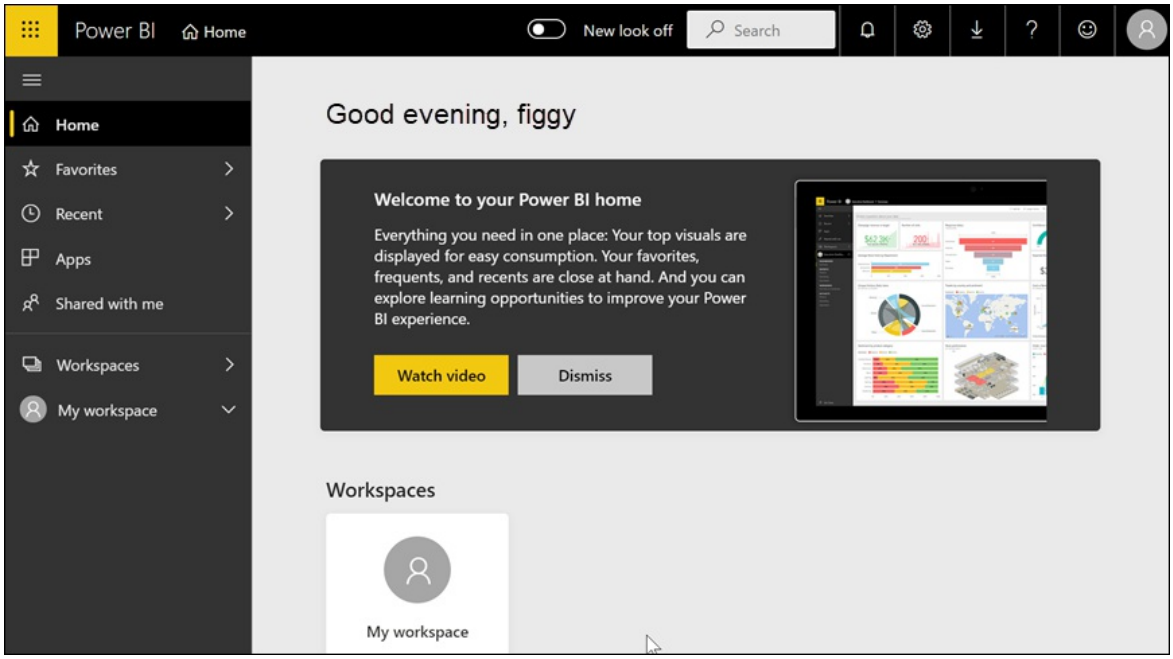
- If you get a message like this, review the terms and conditions. If you agree, select **Start**.



3. Optionally, invite some colleagues to join you.

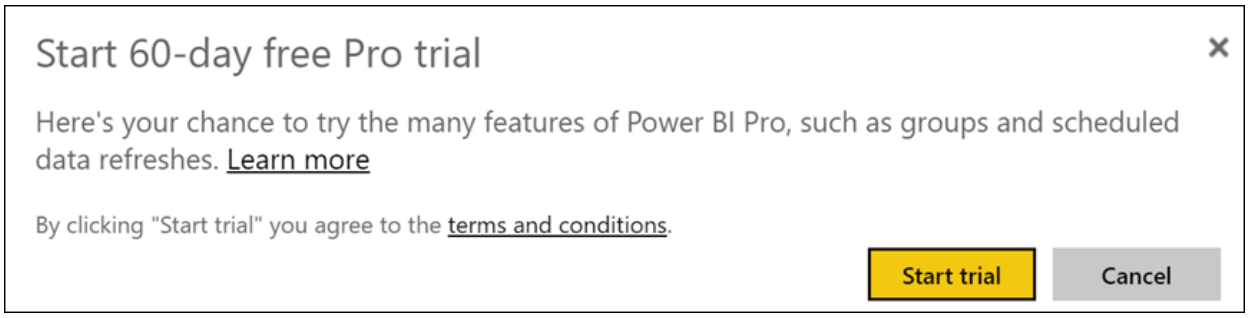


4. At this point, you may have to wait if Microsoft is setting up a new tenant. Otherwise, the Power BI service opens in your browser.



Sign up for an individual trial of Power BI Pro

Congratulations on signing into your Power BI account for the first time! You now have a free license[2]. As you start to explore the Power BI service, you'll see pop-ups asking if you want to upgrade to an individual trial of Power BI Pro. Some features of the Power BI service require a Pro license. If you'd like to start a free 60 day individual trial of Power BI Pro, select **Start trial**.

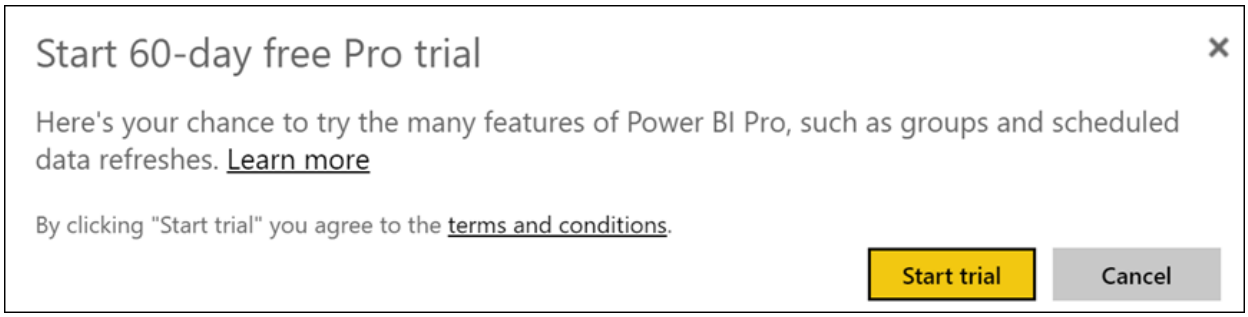


[2] In some organizations, your default Power BI account may be a Power BI **Pro** license. For example, some versions of Microsoft 365 include a Power BI Pro license. To learn how to look up your user license, see what license do I have?

Trial expiration

When your free individual trial of Power BI Pro expires, your license changes back to a Power BI (free) license. The trial cannot be extended. You will no longer have access to features that require a Power BI Pro license. For more information, see Features by license type.

If a Power BI (free) license is sufficient, you don't have to do anything else. To take advantage of Power BI Pro features, purchase a Pro license by selecting **Buy now** or visiting Power BI pricing.



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

Troubleshooting the sign-up process

In most cases, you can sign up for Power BI 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 addresses (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 Power BI 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 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, 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 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.

Next steps

Power BI features by license type
Tips for finding help

More questions? Try asking the Power BI Community

Power BI service features by license type

3/18/2021 • 2 minutes to read • Edit Online

There are three kinds of Power BI per-user licenses: Free, Pro, and Premium Per User. Which type of license a user needs is determined by where content is stored, how they'll interact with that content, and if that content uses Premium features. Where content can be stored is determined by your organization's license type.

Licenses and license types

One type of license, Power BI Premium capacity-based license, allows users with a free license to act on content in workspaces that are assigned to Premium capacity. Outside of Premium capacity, a user with a free license can only use the Power BI service to connect to data and create reports and dashboards in **My Workspace**. They can't share content with others or publish content to other workspaces. To learn more about workspace types, see Types of workspaces. To discover more about Power BI Premium, see What is Power BI Premium?

A Power BI license with free and Pro per-user license only uses a shared and limited capacity to process content. If content is stored in that shared capacity, users who are assigned a Power BI Pro license can collaborate only with other Power BI Pro users. They can consume content shared by other users, publish content to app workspaces, share dashboards, and subscribe to dashboards and reports. When workspaces are in Premium capacity, Pro users may distribute content to users who don't have a Power BI Pro license.

When using Premium Per User licenses, content created by a Premium Per User licensed user can only be shared with other users that have a Premium license, unless that content is specifically put on a workspace hosted on a Premium capacity. The table below summarizes the basic capabilities of each license type.

LICENSE TYPE	CAPABILITIES WHEN WORKSPACE IS IN SHARED CAPACITY	ADDITIONAL CAPABILITIES WHEN WORKSPACE IS IN PREMIUM CAPACITY
Power BI (free)	Access to content in My Workspace	Consume content shared with them
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 licenses
Power BI Premium Per User	Publish content to other workspaces, share dashboards, subscribe to dashboards and reports, share with users who have a Premium Per User license	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 introduced Power BI Premium Gen2 as a preview offering, which improves the Power BI Premium experience with improvements in the following:

- Performance
- Per-user licensing. See the Premium Per User FAQ for more information.
- Greater scale
- Improved metrics
- Autoscaling
- Reduced management overhead

For more information about Power BI Premium Gen2, see Power BI Premium Generation 2 (preview).

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.

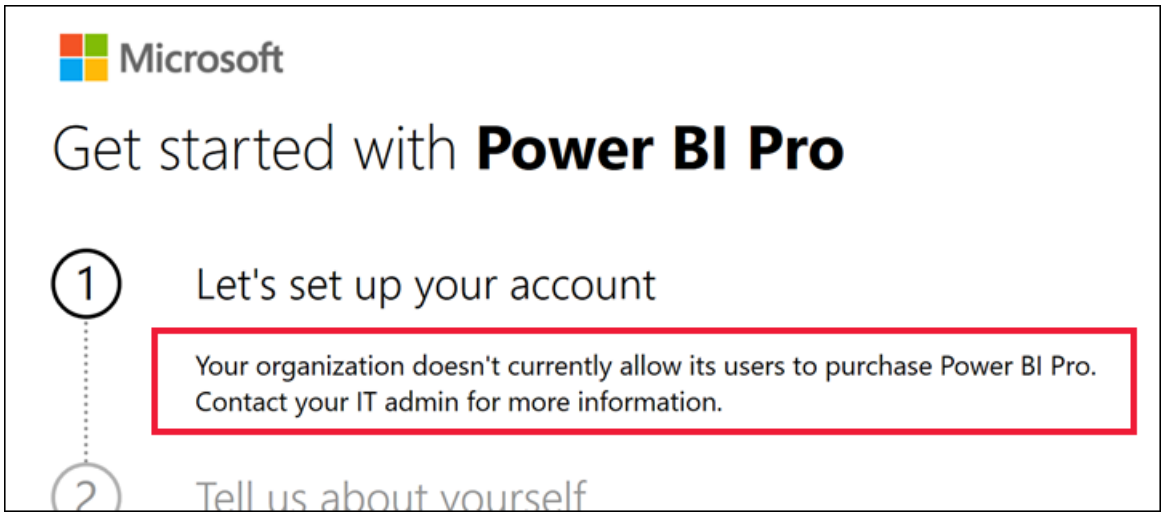
Next steps

- 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

3/5/2021 • 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.



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

3/5/2021 • 2 minutes to read • Edit Online

You've tried to sign up for Power BI and received a message that sign up is disabled. For a variety of reasons, some organizations block members from self-service sign up. 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.

Azure security baseline for Power BI

3/5/2021 • 24 minutes to read • Edit Online

This security baseline applies guidance from the Azure Security Benchmark version 2.0 to Power BI. The Azure Security Benchmark provides recommendations on how you can secure your cloud solutions on Azure. The content is grouped by the **security controls** defined by the Azure Security Benchmark and the related guidance applicable to Power BI. **Controls** not applicable to Power BI have been excluded.

To see how Power BI completely maps to the Azure Security Benchmark, see the full Power BI security baseline mapping file.

Network Security

For more information, see the Azure Security Benchmark: Network Security.

NS-3: Establish private network access to Azure services

Guidance: Power BI supports connecting your Power BI tenant to a Private link endpoint and disabling public internet access.

- Private links for accessing Power BI

Azure Security Center monitoring: Not applicable

Responsibility: Shared

Identity Management

For more information, see the Azure Security Benchmark: Identity Management.

IM-1: Standardize Azure Active Directory as the central identity and authentication system

Guidance: Power BI is integrated with Azure Active Directory (Azure AD) which is Azure's default identity and access management service. You should standardize on Azure AD to govern your organization's identity and access management.

Securing Azure AD should be a high priority in your organization's cloud security practice. Azure AD provides an identity secure score to help you assess identity security posture relative to Microsoft's best practice recommendations. Use the score to gauge how closely your configuration matches best practice recommendations, and to make improvements in your security posture.

Note: Azure AD supports external identities that allow users without a Microsoft account to sign in to their applications and resources with their external identity.

- Tenancy in Azure Active Directory
- How to create and configure an Azure AD instance
- Use external identity providers for application
- What is the identity secure score in Azure Active Directory

Azure Security Center monitoring: Not applicable

Responsibility: Customer

IM-2: Manage application identities securely and automatically

Guidance: Power BI and Power BI Embedded support the use of Service Principals. Store any Service Principal credentials used for encrypting or accessing Power BI in a Key Vault, assign proper access policies to the vault and regularly review access permissions.

Automate Premium workspace and dataset tasks with service principals https://docs.microsoft.com/power-bi/admin/service-premium-service-principal

Azure Security Center monitoring: Not applicable

Responsibility: Customer

IM-3: Use Azure AD single sign-on (SSO) for application access

Guidance: Power BI uses Azure Active Directory to provide identity and access management to Azure resources, cloud applications, and on-premises applications. This includes enterprise identities such as employees, as well as external identities such as partners, vendors, and suppliers. This enables single sign-on (SSO) to manage and secure access to your organization's data and resources on-premises and in the cloud. Connect all your users, applications, and devices to the Azure AD for seamless, secure access and greater visibility and control.

- Understand Application SSO with Azure AD

Azure Security Center monitoring: Not applicable

Responsibility: Customer

IM-4: Use strong authentication controls for all Azure Active Directory based access

Guidance: Power BI is integrated with Azure AD that supports strong authentication controls through multi-factor authentication (MFA), and strong passwordless methods.

- Multi-factor authentication - Enable Azure AD MFA and follow Azure Security Center Identity and Access Management recommendations for some best practices in your MFA setup. MFA can be enforced on all, select users or at the per-user level based on sign-in conditions and risk factors.
- Passwordless authentication – Three passwordless authentication options are available: Windows Hello for Business, Microsoft Authenticator app, and on-premises authentication methods such as smart cards.

For administrator and privileged users, ensure the highest level of strong authentication is used, followed by rolling out the appropriate strong authentication policy to other users.

Note: MFA can only be enforced for user accounts enabled in Azure AD. Power BI Service Principals do not support the use of MFA.

- How to enable MFA in Azure
- Introduction to passwordless authentication options for Azure Active Directory

Azure Security Center monitoring: Not applicable

Responsibility: Customer

IM-5: Monitor and alert on account anomalies

Guidance: Define anomaly detection policies in Microsoft Cloud App Security which can be independently scoped, so that they apply to only the users and groups that you want to include. These anomaly detection policies can help detect and monitor behavior anomalies related to users accessing and using Power BI.

- Using Microsoft Cloud App Security Controls in Power BI

Azure Security Center monitoring: Not applicable

Responsibility: Customer

IM-6: Restrict Azure resource access based on conditions

Guidance: Power BI supports Azure AD conditional access for a more granular access control based on user-defined conditions, such as user logins from certain IP ranges will need to use MFA for login. Granular authentication session management policy can also be used for different use cases.

- Azure conditional access overview
- Common conditional access policies
- Configure authentication session management with conditional access
- Using Microsoft Cloud App Security Controls in Power BI

Azure Security Center monitoring: Not applicable

Responsibility: Customer

IM-7: Eliminate unintended credential exposure

Guidance: For Power BI embedded applications it is recommended to implement Credential Scanner to identify credentials within your code. Credential Scanner will also encourage moving discovered credentials to more secure locations such as Azure Key Vault.

Store any encryption keys or Service Principal credentials used for encrypting or accessing Power BI in a Key Vault, assign proper access policies to the vault and regularly review access permissions.

For GitHub, you can use native secret scanning feature to identify credentials or other form of secrets within the code.

- Bring your own encryption keys for Power BI

How to set up Credential

- Scanner
- GitHub secret scanning

Azure Security Center monitoring: Not applicable

Responsibility: Shared

Privileged Access

For more information, see the Azure Security Benchmark: Privileged Access.

PA-1: Protect and limit highly privileged users

Guidance: To reduce risk and follow the principle of least privilege, it is recommended to keep membership of the Power BI administrators to a small number of people. Users with these privileged permissions could potentially access and modify all any management feature for the organization. Global administrators, via Microsoft 365 or Azure Active Directory, implicitly possess administrator rights in the Power BI service as well.

Power BI has below highly privileged accounts:

- Global admin
- Billing admin
- License admin
- User admin
- Power BI admin
- Power BI Premium Capacity admin
- Power BI Embedded Capacity admin

Power BI supports session policies in Azure AD to enable conditional access policies and route sessions used in Power BI through the Cloud App Security service.

Enable just-in-time (JIT) privileged access for the Power BI admin accounts using M365 Privileged access management.

- Administrator roles related to Power BI
- M365 Privileged Access Management
- Cloud App Security controls in Power BI

Azure Security Center monitoring: Not applicable

Responsibility: Customer

PA-2: Restrict administrative access to business-critical systems

Guidance: Limit the number of highly-privileged accounts or roles with elevated access to Power BI.

You can enable just-in-time (JIT) privileged access using the M365 Privileged access management guidance here.

Additional details can be found on page 183 of the Power BI Enterprise Deployment document here.

Azure Security Center monitoring: Not applicable

Responsibility: Customer

PA-3: Review and reconcile user access regularly

Guidance: As a Power BI service admin, you can analyze usage for all Power BI resources at the tenant level by using custom reports based on the Power BI activity log. You can download the activities by using a REST API or PowerShell cmdlet. You can also filter the activity data by date range, user, and activity type.

You must meet these requirements to access the Power BI activity log:

- You must either be a global admin or a Power BI service admin.
- You have installed the Power BI Management cmdlets locally or use the Power BI Management cmdlets in Azure Cloud Shell.

Once these requirements are met you can follow the guidance below to track user activity within Power BI:

- Track users activity in Power BI

Azure Security Center monitoring: Not applicable

Responsibility: Customer

PA-4: Set up emergency access in Azure AD

Guidance: Power BI is integrated with Azure Active Directory and M365 to manage its resources. To prevent being accidentally locked out of your M365 tenant, or Azure AD organization, set up an emergency access account for access when normal administrative accounts cannot be used. Emergency access accounts are usually highly privileged, and they should not be assigned to specific individuals. Emergency access accounts are limited to emergency or "break glass"' scenarios where normal administrative accounts can't be used.

You should ensure that the credentials (such as password, certificate, or smart card) for emergency access accounts are kept secure and known only to individuals who are authorized to use them only in an emergency.

- Manage emergency access accounts in Azure AD
- Protect your M365 accounts

Azure Security Center monitoring: Not applicable

Responsibility: Customer

PA-6: Use privileged access workstations

Guidance: Secured, isolated workstations are critically important for the security of sensitive roles like administrators, developers, and critical service operators. Use highly secured user workstations and/or Azure Bastion for administrative tasks related to managing Power BI. Use Azure Active Directory, Microsoft Defender Advanced Threat Protection (ATP), and/or Microsoft Intune to deploy a secure and managed user workstation for administrative tasks. The secured workstations can be centrally managed to enforce secured configuration including strong authentication, software and hardware baselines, restricted logical and network access.

Understand privileged access

- workstations
- Deploy a privileged access workstation

Azure Security Center monitoring: Not applicable

Responsibility: Customer

Data Protection

For more information, see the Azure Security Benchmark: Data Protection.

DP-1: Discovery, classify and label sensitive data

Guidance: Use Microsoft Information Protection sensitivity labels on your reports, dashboards, datasets, and dataflows to guard your sensitive content against unauthorized data access and leakage.

Use Microsoft Information Protection sensitivity labels to classify and label your reports, dashboards, datasets, and dataflows in Power BI service and to protect your sensitive content from unauthorized data access and leakage when content is exported from Power BI service to Excel, PowerPoint and PDF files.

- How to apply sensitivity labels in Power BI

Azure Security Center monitoring: Not applicable

Responsibility: Customer

DP-2: Protect sensitive data

Guidance: Power BI integrates with Microsoft Information Protection sensitivity labels for sensitive data protection. For more details see Microsoft Information Protection sensitivity labels in Power BI

Power BI allows service users to bring their own key to protect data at rest. For more details see Bring your own encryption keys for Power BI

Customers have the option to keep data sources on-premise and leverage Direct Query or Live Connect with an on-premise data gateway to minimize data exposure to the cloud service. For more details see What is an on-premises data gateway?

Power BI supports Row Level Security. For more details see Row-level security (RLS) with Power BI. Note that RLS can be applied even to Direct Query data sources in which case PBIX file acts as a security enabling proxy.

Azure Security Center monitoring: Not applicable

Responsibility: Customer

DP-3: Monitor for unauthorized transfer of sensitive data

Guidance: This control can be partially achieved by using Microsoft Cloud App Security support for Power BI.

Using Cloud App Security with Power BI, you can help protect your Power BI reports, data, and services from

unintended leaks or breaches. With Cloud App Security, you create conditional access policies for your organization's data, using real-time session controls in Azure Active Directory (Azure AD), that help to ensure your Power BI analytics are secure. Once these policies have been set, administrators can monitor user access and activity, perform real-time risk analysis, and set label-specific controls.

Using

- Microsoft Cloud App Security controls in Power BI

Azure Security Center monitoring: Not applicable

Responsibility: Customer

DP-4: Encrypt sensitive information in transit

Guidance: Ensure for HTTP traffic, that any clients and data sources connecting to your Power BI resources can negotiate TLS v1.2 or greater.

- Enforcing TLS version usage
- Information on TLS Security

Azure Security Center monitoring: Not applicable

Responsibility: Customer

DP-5: Encrypt sensitive data at rest

Guidance: Power BI encrypts data at rest and in process. By default, Power BI uses Microsoft-managed keys to encrypt your data. Organizations can choose to use their own keys for encryption of user content at rest across Power BI, from report images to imported datasets in Premium capacities.

- Use bring-your-own-key in Power BI

Azure Security Center monitoring: Not applicable

Responsibility: Shared

Asset Management

For more information, see the Azure Security Benchmark: Asset Management.

AM-1: Ensure security team has visibility into risks for assets

Guidance: Use Azure Sentinel with your Power BI Office Audit logs to ensure your security team has visibility into risks for your Power BI assets.

- Connect Office 365 Logs to Azure Sentinel

Azure Security Center monitoring: Not applicable

Responsibility: Customer

AM-2: Ensure security team has access to asset inventory and metadata

Guidance: Ensure that security teams have access to a continuously updated inventory of Power BI Embedded resources. Security teams often need this inventory to evaluate their organization's potential exposure to emerging risks, and as an input to continuously security improvements.

Azure Resource Graph can query for and discover all Power BI Embedded resources in your subscriptions.

Logically organize assets according to your organization's taxonomy using Tags as well as other metadata in Azure (Name, Description, and Category).

- How to create queries with Azure Resource Graph Explorer
- Resource naming and tagging decision guide

Azure Security Center monitoring: Not applicable

Responsibility: Customer

AM-3: Use only approved Azure services

Guidance: Power BI supports Azure Resource Manager-based deployments for Power BI Embedded, and you are able to restrict the deploying of its resources via Azure Policy using a custom Policy definition.

Use Azure Policy to audit and restrict which services users can provision in your environment. Use Azure Resource Graph to query for and discover resources within their subscriptions. You can also use Azure Monitor to create rules to trigger alerts when a non-approved service is detected.

- How to configure and manage Azure Policy

How to deny a specific resource type with

- Azure Policy

How to create queries with Azure

- Resource Graph Explorer

Azure Security Center monitoring: Not applicable

Responsibility: Customer

Logging and Threat Detection

For more information, see the Azure Security Benchmark: Logging and Threat Detection.

LT-2: Enable threat detection for Azure identity and access management

Guidance: Forward any logs from Power BI to your SIEM which can be used to set up custom threat detections. Additionally, use Microsoft Cloud App Security (MCAS) controls in Power BI to enable anomaly detection using the guide here.

- Track user activities in Power BI

Azure Security Center monitoring: Not applicable

Responsibility: Customer

LT-3: Enable logging for Azure network activities

Guidance: Power BI is a fully managed SaaS offering and the underlying network configuration and logging is Microsoft's responsibility. For customers utilizing Private Links some logging and monitoring is available that can be configured.

- Private Link logging and monitoring

Azure Security Center monitoring: Not applicable

Responsibility: Shared

LT-4: Enable logging for Azure resources

Guidance: With Power BI, you have two options to track user activity: The Power BI activity log and the unified audit log. These logs both contain a complete copy of the Power BI auditing data, but there are several key differences, as summarized below.

Unified Audit Log:

- Includes events from SharePoint Online, Exchange Online, Dynamics 365, and other services in addition to the Power BI auditing events.
- Only users with View-Only Audit Logs or Audit Logs permissions have access, such as global admins and auditors.
- Global admins and auditors can search the unified audit log by using the Microsoft 365 Security Center and the Microsoft 365 Compliance Center.
- Global admins and auditors can download audit log entries by using Microsoft 365 Management APIs and cmdlets.
- Keeps audit data for 90 days.
- Retains audit data, even if the tenant is moved to a different Azure region.

Power BI Activity Log:

- Includes only the Power BI auditing events.
- Global admins and Power BI service admins have access.
- There's no user interface to search the activity log yet.
- Global admins and Power BI service admins can download activity log entries by using a Power BI REST API and management cmdlet.
- Keeps activity data for 30 days.
- Doesn't retain activity data when the tenant is moved to a different Azure region.
- Power BI Auditing data
- Power BI Activity Log
- Power BI Audit Log

Azure Security Center monitoring: Not applicable

Responsibility: Shared

LT-5: Centralize security log management and analysis

Guidance: Power BI, centralizes logs in two places: the Power BI activity log and the unified audit log. These logs both contain a complete copy of the Power BI auditing data, but there are several key differences, as summarized below.

Unified Audit Log:

- Includes events from SharePoint Online, Exchange Online, Dynamics 365, and other services in addition to the Power BI auditing events.
- Only users with View-Only Audit Logs or Audit Logs permissions have access, such as global admins and auditors.
- Global admins and auditors can search the unified audit log by using the Microsoft 365 Security Center and the Microsoft 365 Compliance Center.
- Global admins and auditors can download audit log entries by using Microsoft 365 Management APIs and cmdlets.
- Keeps audit data for 90 days.

- Retains audit data, even if the tenant is moved to a different Azure region.

Power BI Activity Log:

- Includes only the Power BI auditing events.
- Global admins and Power BI service admins have access.
- There's no user interface to search the activity log yet.
- Global admins and Power BI service admins can download activity log entries by using a Power BI REST API and management cmdlet.
- Keeps activity data for 30 days.
- Doesn't retain activity data when the tenant is moved to a different Azure region.
- Power BI Auditing data
- Power BI Activity Log
- Power BI Audit Log

Azure Security Center monitoring: Not applicable

Responsibility: Customer

LT-6: Configure log storage retention

Guidance: Configure your storage retention policies for your Office Audit logs according to your compliance, regulation, and business requirements.

- Office Audit Log Retention Policies

Azure Security Center monitoring: Not applicable

Responsibility: Customer

Incident Response

For more information, see the Azure Security Benchmark: Incident Response.

IR-1: Preparation – update incident response process for Azure

Guidance: Ensure your organization has processes to respond to security incidents, has updated these processes for Azure, and is regularly exercising them to ensure readiness.

- Implement security across the enterprise environment
- Incident response reference guide

Azure Security Center monitoring: Not applicable

Responsibility: Customer

IR-2: Preparation – setup incident notification

Guidance: Set up security incident contact information in Azure Security Center. This contact information is used by Microsoft to contact you if the Microsoft Security Response Center (MSRC) discovers that your data has been accessed by an unlawful or unauthorized party. You also have options to customize incident alert and notification in different Azure services based on your incident response needs.

- How to set the Azure Security Center security contact

Azure Security Center monitoring: Not applicable

Responsibility: Customer

IR-3: Detection and analysis – create incidents based on high quality alerts

Guidance: Ensure you have a process to create high-quality alerts and measure the quality of alerts. This allows you to learn lessons from past incidents and prioritize alerts for analysts, so they don't waste time on false positives.

Monitor alerts related to Power BI in Microsoft Cloud App Security. High-quality alerts can be built based on experience from past incidents, validated community sources, and tools designed to generate and clean up alerts by fusing and correlating diverse signal sources.

- Monitor alerts in Cloud App Security

Azure Security Center monitoring: Not applicable

Responsibility: Customer

IR-4: Detection and analysis – investigate an incident

Guidance: Build out an incident response guide for your organization. Conduct exercises to test your systems' incident response capabilities on a regular cadence. Identify weak points and gaps and revise plan as needed.

Ensure that there are written incident response plans that define all roles of personnel as well as phases of incident handling/management from detection to post-incident review.

- Incidents overview in Microsoft Threat Protection

Azure Security Center monitoring: Not applicable

Responsibility: Customer

IR-5: Detection and analysis – prioritize incidents

Guidance: Provide context to analysts on which incidents to focus on first based on alert severity and asset sensitivity.

Microsoft Threat Protection applies correlation analytics and aggregates all related alerts and investigations from different products into one incident. Microsoft Threat Protection also triggers unique alerts on activities that can only be identified as malicious given the end-to-end visibility that Microsoft Threat Protection has across the entire estate and suite of products. By doing so, Microsoft Threat Protection narrates the broader attack story, allowing a security operations analyst to understand and deal with complex threats across the organization.

- Prioritize incidents in Microsoft Threat Protection

Azure Security Center monitoring: Not applicable

Responsibility: Customer

IR-6: Containment, eradication and recovery – automate the incident handling

Guidance: Automate manual repetitive tasks to speed up response time and reduce the burden on analysts. Manual tasks take longer to execute, slowing each incident and reducing how many incidents an analyst can handle. Manual tasks also increase analyst fatigue, which increases the risk of human error that causes delays, and degrades the ability of analysts to focus effectively on complex tasks.

Use workflow automation features in Microsoft Threat Protection to automatically trigger investigations and remediation in response to incoming security alerts.

- Automated investigation and response in Microsoft Threat Protection

Azure Security Center monitoring: Not applicable

Responsibility: Customer

Posture and Vulnerability Management

For more information, see the Azure Security Benchmark: Posture and Vulnerability Management.

PV-1: Establish secure configurations for Azure services

Guidance: Configure your Power BI service with the settings appropriate to your organization and security stance. Settings for access to the service, and content, as well as workspace and app security should be carefully considered. See Power BI Security and Data Protection in the Power BI Enterprise Deployment whitepaper.

- Enterprise Deployment Whitepaper

Azure Security Center monitoring: Not applicable

Responsibility: Customer

PV-2: Sustain secure configurations for Azure services

Guidance: Monitor your Power BI instance using the Power BI Admin REST APIs.

- Power BI Admin REST APIs
- Power BI enterprise deployment whitepaper

Azure Security Center monitoring: Not applicable

Responsibility: Customer

PV-8: Conduct regular attack simulation

Guidance: As required, conduct penetration testing or red team activities on your Azure resources and ensure remediation of all critical security findings.

Follow the Microsoft Cloud Penetration Testing Rules of Engagement to ensure your penetration tests are not in violation of Microsoft policies. Use Microsoft's strategy and execution of Red Teaming and live site penetration testing against Microsoft-managed cloud infrastructure, services, and applications.

- Penetration testing in Azure
- Penetration Testing Rules of Engagement
- Microsoft Cloud Red Teaming

Azure Security Center monitoring: Not applicable

Responsibility: Shared

Backup and Recovery

For more information, see the Azure Security Benchmark: Backup and Recovery.

BR-3: Validate all backups including customer-managed keys

Guidance: If you are using the Bring Your Own Key (BYOK) feature in Power BI you need to periodically validate that you can access and restore your customer-managed keys.

- BYOK in Power BI

Azure Security Center monitoring: Not applicable

Responsibility: Customer

BR-4: Mitigate risk of lost keys

Guidance: If you are using the Bring Your Own Key (BYOK) feature in Power BI you need to ensure the Key Vault controlling your customer-managed keys is configured with the guidance in the BYOK in Power BI documentation below. Enable soft delete and purge protection in Azure Key Vault to protect keys against accidental or malicious deletion.

- BYOK in Power BI
- How to enable soft delete and purge protection in Key Vault

For Gateway key resources ensure you are following the guidance in the Gateway recovery key documentation below.

- On-premises data gateway recovery key

Azure Security Center monitoring: Not applicable

Responsibility: Customer

Governance and Strategy

For more information, see the Azure Security Benchmark: Governance and Strategy.

GS-1: Define asset management and data protection strategy

Guidance: Ensure you document and communicate a clear strategy for continuous monitoring and protection of systems and data. Prioritize discovery, assessment, protection, and monitoring of business-critical data and systems.

This strategy should include documented guidance, policy, and standards for the following elements:

- Data classification standard in accordance with the business risks
- Security organization visibility into risks and asset inventory
- Security organization approval of Azure services for use
- Security of assets through their lifecycle
- Required access control strategy in accordance with organizational data classification
- Use of Azure native and third-party data protection capabilities
- Data encryption requirements for in-transit and at-rest use cases
- Appropriate cryptographic standards

For more information, see the following references:

- Azure Security Architecture Recommendation - Storage, data, and encryption
- Azure Security Fundamentals - Azure Data security, encryption, and storage
- Cloud Adoption Framework - Azure data security and encryption best practices
- Azure Security Benchmark - Asset management
- Azure Security Benchmark - Data Protection

Azure Security Center monitoring: Not applicable

Responsibility: Customer

GS-2: Define enterprise segmentation strategy

Guidance: Establish an enterprise-wide strategy to segmenting access to assets using a combination of identity, network, application, subscription, management group, and other controls.

Carefully balance the need for security separation with the need to enable daily operation of the systems that need to communicate with each other and access data.

Ensure that the segmentation strategy is implemented consistently across control types including network security, identity and access models, and application permission/access models, and human process controls.

- Guidance on segmentation strategy in Azure (video)
- Guidance on segmentation strategy in Azure (document)
- Align network segmentation with enterprise segmentation strategy

Azure Security Center monitoring: Not applicable

Responsibility: Customer

GS-3: Define security posture management strategy

Guidance: Continuously measure and mitigate risks to your individual assets and the environment they are hosted in. Prioritize high value assets and highly-exposed attack surfaces, such as published applications, network ingress and egress points, user and administrator endpoints, etc.

- Azure Security Benchmark - Posture and vulnerability management

Azure Security Center monitoring: Not applicable

Responsibility: Customer

GS-4: Align organization roles, responsibilities, and accountabilities

Guidance: Ensure you document and communicate a clear strategy for roles and responsibilities in your security organization. Prioritize providing clear accountability for security decisions, educating everyone on the shared responsibility model, and educate technical teams on technology to secure the cloud.

- Azure Security Best Practice 1 – People: Educate Teams on Cloud Security Journey
- Azure Security Best Practice 2 - People: Educate Teams on Cloud Security Technology
- Azure Security Best Practice 3 - Process: Assign Accountability for Cloud Security Decisions

Azure Security Center monitoring: Not applicable

Responsibility: Customer

GS-5: Define network security strategy

Guidance: Establish an Azure network security approach as part of your organization's overall security access control strategy.

This strategy should include documented guidance, policy, and standards for the following elements:

- Centralized network management and security responsibility
- Virtual network segmentation model aligned with the enterprise segmentation strategy
- Remediation strategy in different threat and attack scenarios
- Internet edge and ingress and egress strategy

- Hybrid cloud and on-premises interconnectivity strategy
- Up-to-date network security artifacts (e.g. network diagrams, reference network architecture)

For more information, see the following references:

- Azure Security Best Practice 11 - Architecture. Single unified security strategy
- Azure Security Benchmark - Network Security
- Azure network security overview
- Enterprise network architecture strategy

Azure Security Center monitoring: Not applicable

Responsibility: Customer

GS-6: Define identity and privileged access strategy

Guidance: Establish an Azure identity and privileged access approaches as part of your organization's overall security access control strategy.

This strategy should include documented guidance, policy, and standards for the following elements:

- A centralized identity and authentication system and its interconnectivity with other internal and external identity systems
- Strong authentication methods in different use cases and conditions
- Protection of highly privileged users
- Anomaly user activities monitoring and handling
- User identity and access review and reconciliation process

For more information, see the following references:

- Azure Security Benchmark - Identity management
- Azure Security Benchmark - Privileged access
- Azure Security Best Practice 11 - Architecture. Single unified security strategy
- Azure identity management security overview

Azure Security Center monitoring: Not applicable

Responsibility: Customer

GS-7: Define logging and threat response strategy

Guidance: Establish a logging and threat response strategy to rapidly detect and remediate threats while meeting compliance requirements. Prioritize providing analysts with high-quality alerts and seamless experiences so that they can focus on threats rather than integration and manual steps.

This strategy should include documented guidance, policy, and standards for the following elements:

- The security operations (SecOps) organization's role and responsibilities
- A well-defined incident response process aligning with NIST or another industry framework
- Log capture and retention to support threat detection, incident response, and compliance needs
- Centralized visibility of and correlation information about threats, using SIEM, native Azure capabilities, and other sources

- Communication and notification plan with your customers, suppliers, and public parties of interest
- Use of Azure native and third-party platforms for incident handling, such as logging and threat detection, forensics, and attack remediation and eradication
- Processes for handling incidents and post-incident activities, such as lessons learned and evidence retention

For more information, see the following references:

- Azure Security Benchmark - Logging and threat detection
- Azure Security Benchmark - Incident response
- Azure Security Best Practice 4 - Process. Update Incident Response Processes for Cloud
- Azure Adoption Framework, logging, and reporting decision guide
- Azure enterprise scale, management, and monitoring

Azure Security Center monitoring: Not applicable

Responsibility: Customer

Next steps

- See the Azure Security Benchmark V2 overview
- Learn more about Azure security baselines

Get Power BI Desktop

3/11/2021 • 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.

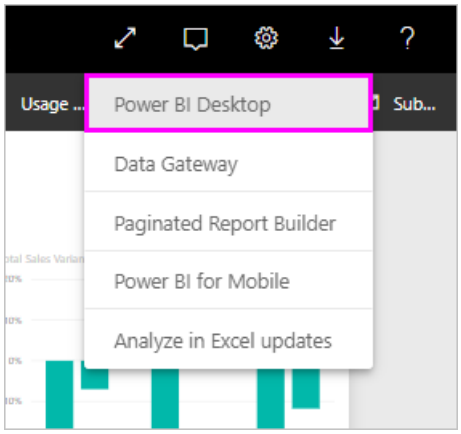
Either of the two approaches gets the latest version of Power BI Desktop onto your computer. However, there are some differences worth noting, as described in the following sections.

> **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.

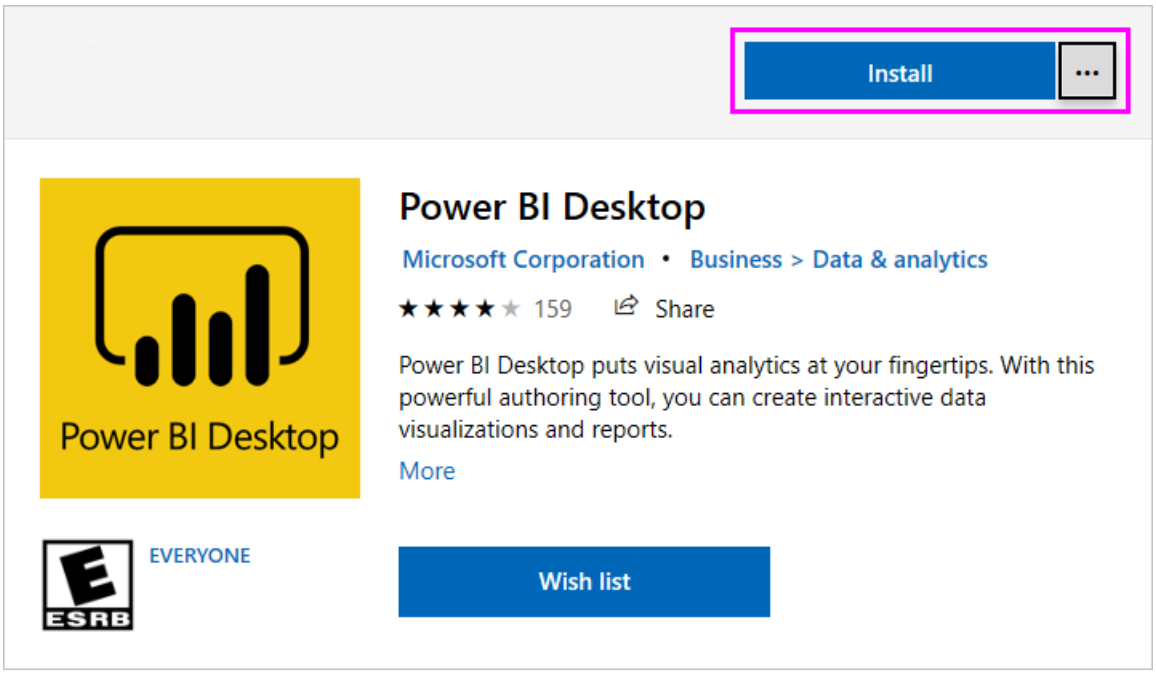
Install as an app from the Microsoft Store

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.

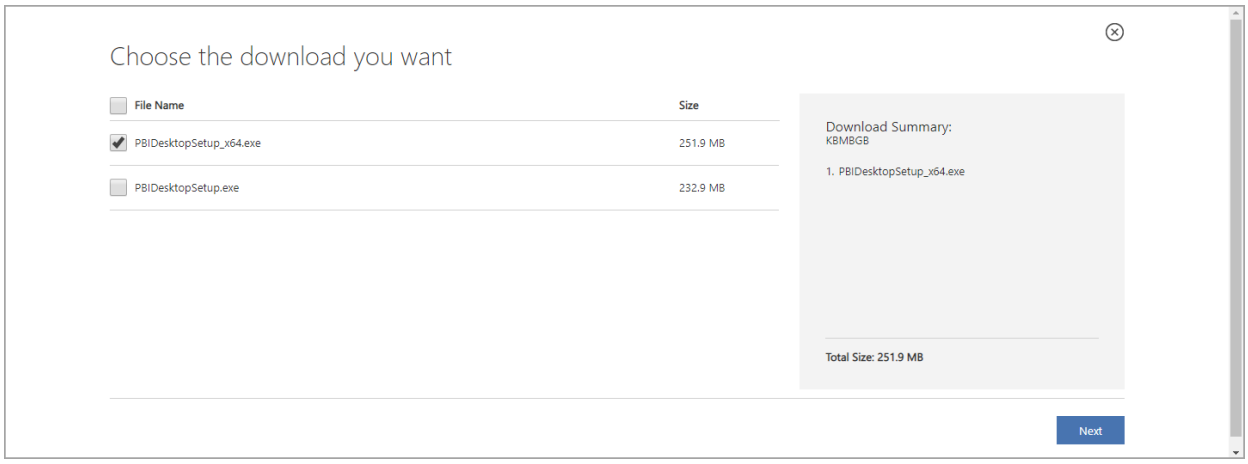
The following consideration and limitations apply when you install Power BI Desktop from the Microsoft Store:

- 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 datasources 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.

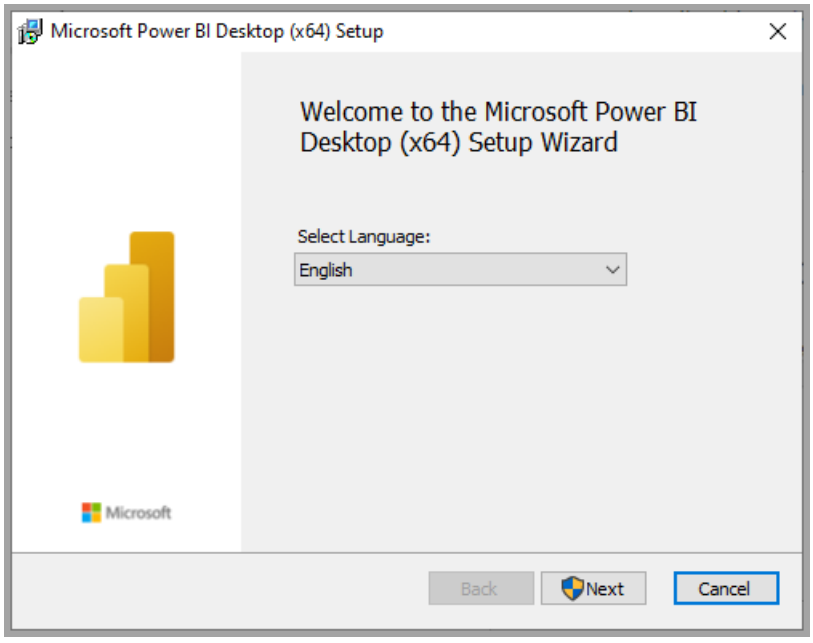


Install Power BI Desktop after downloading it

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

Beginning with the July 2019 release, 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 beginning with the September 2019 release, 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.

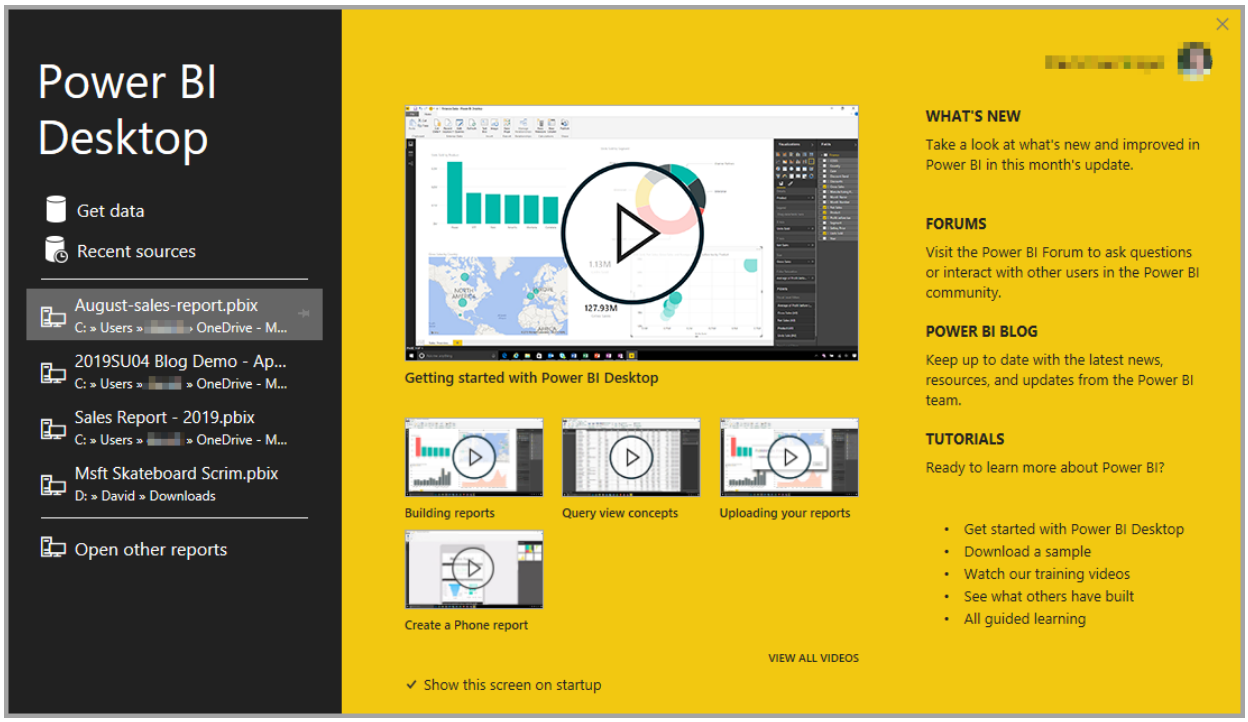


NOTE

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**
> Since January 31st 2021, 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.

> **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
INSTALLLOCATION	File path to where you want it installed
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 **Options** dialog.
REG_SHOWLEADGENDIALOG	A value of 0 disables showing the dialog that appears before you've signed in to Power BI Desktop.

PARAMETER	MEANING
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.

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

3/5/2021 • 6 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

Languages for Power BI Desktop

Power BI Desktop is available in the 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.

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

Choose your language in the Power BI service

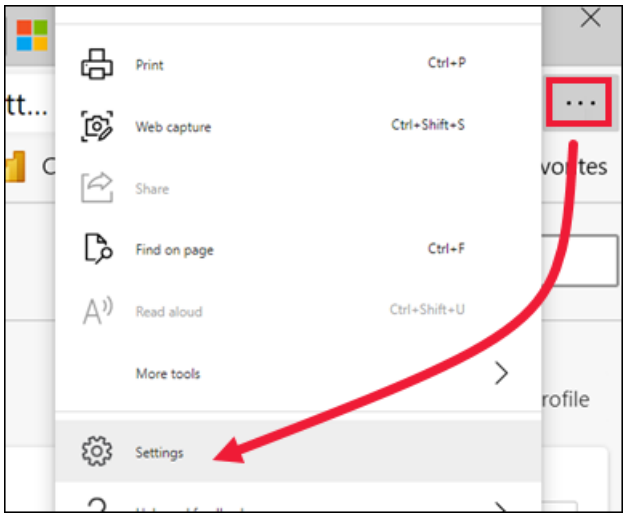
1. In the Power BI service, select the **Settings** icon  > **Settings**.
2. On the **General** tab, select **Language**.
3. Use the language already set for your browser, or select a separate language for the Power BI service.

Choose your language in the browser

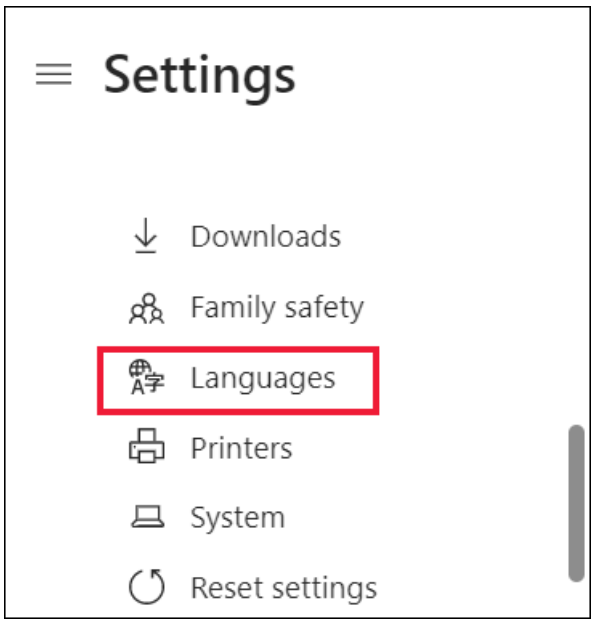
Power BI detects your language based on the language preferences on your computer. The way you access and change these preferences may vary depending on your operating system and browser. Here's how to access these preferences from Microsoft Edge and Google Chrome.

Microsoft Edge

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



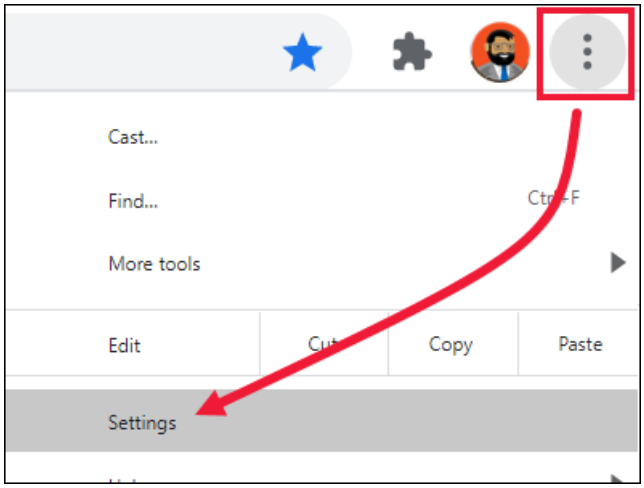
2. Select the **Settings** icon in the upper left corner of your browser window, and choose **Languages**.



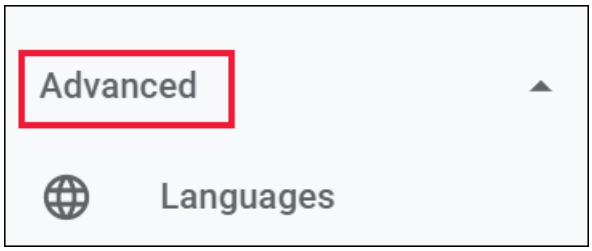
3. Select your preferred language.

Google Chrome (version 87)

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.

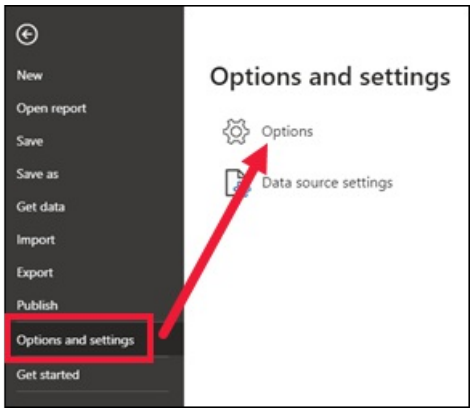
- When you install Power BI Desktop from the Windows Store, it installs all the languages (currently, 42 languages) and by default shows the language that corresponds to the Windows default language.
- When you download Power BI Desktop as a standalone installer, you choose the default language when 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.

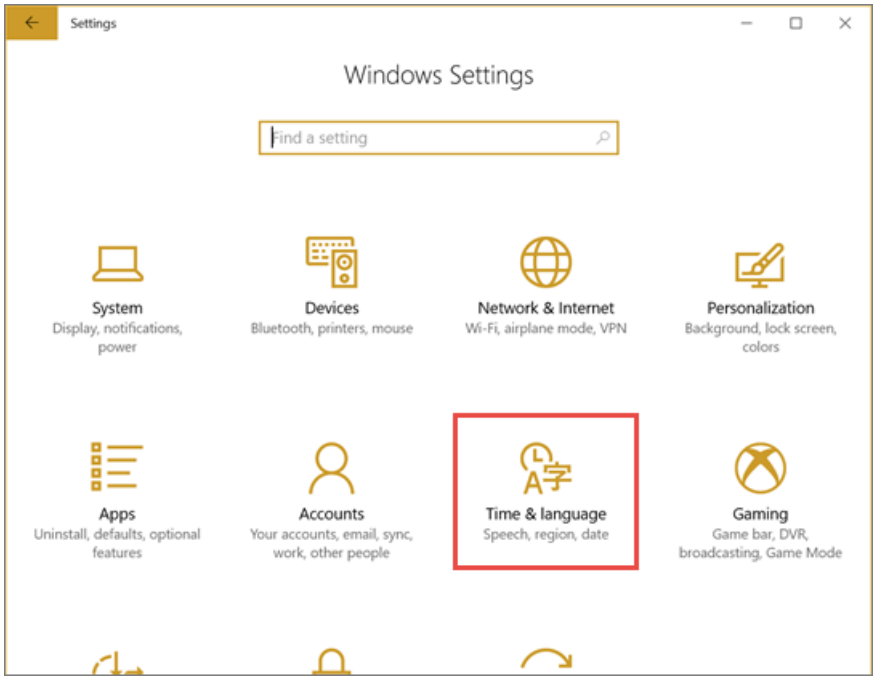
Language support in Power BI Desktop is limited to the languages displayed in the Application Language dropdown.

Verify Power BI Desktop default number and date formatting

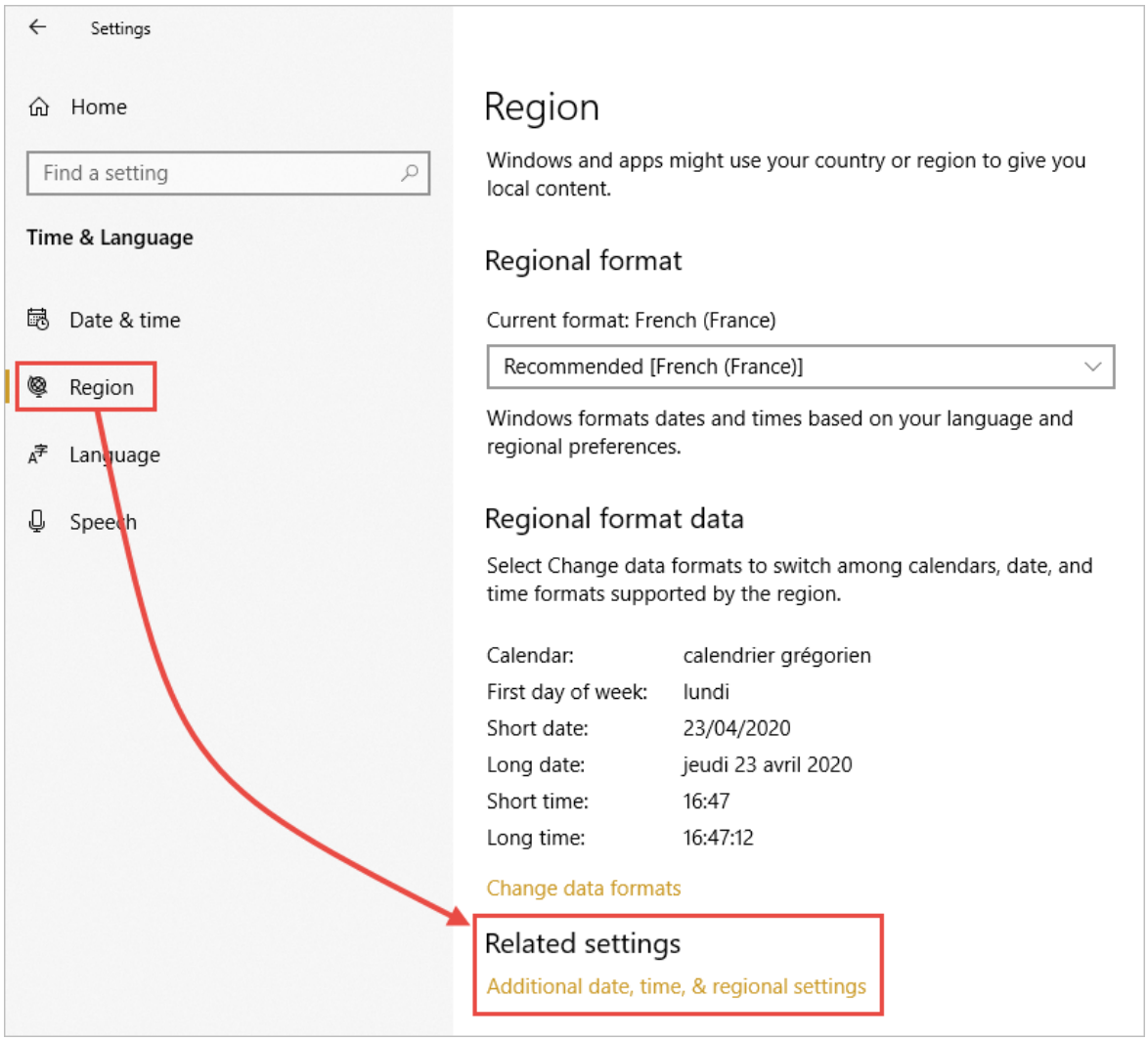
Power BI Desktop gets its default number and date formatting from the Windows Region settings. You can check or change those settings, if needed.

1. On the Windows menu select **Settings**

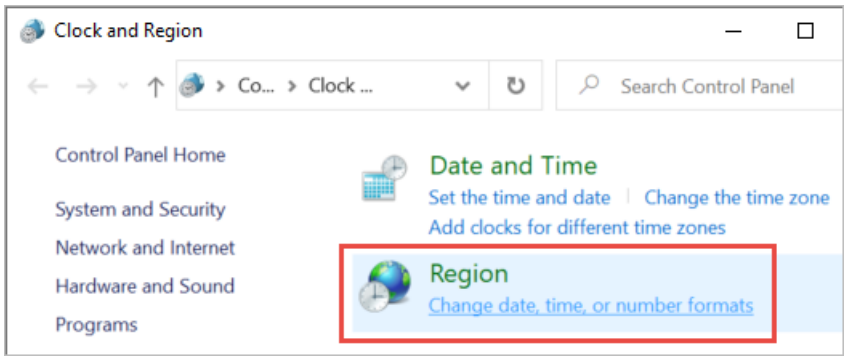
2. In **Windows Settings**, select **Time & language**.



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



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

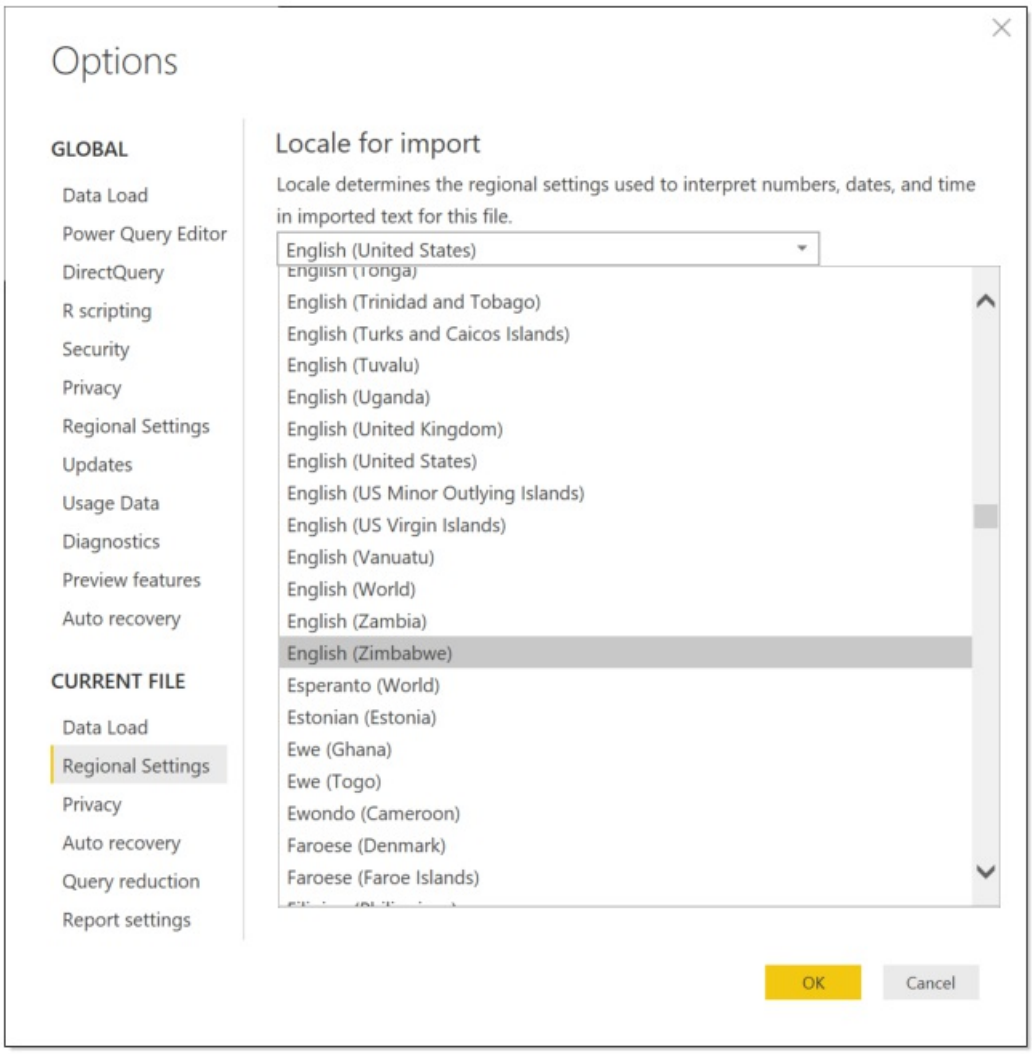


5. Make sure **Match Windows display language** is selected, or change it if necessary.

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

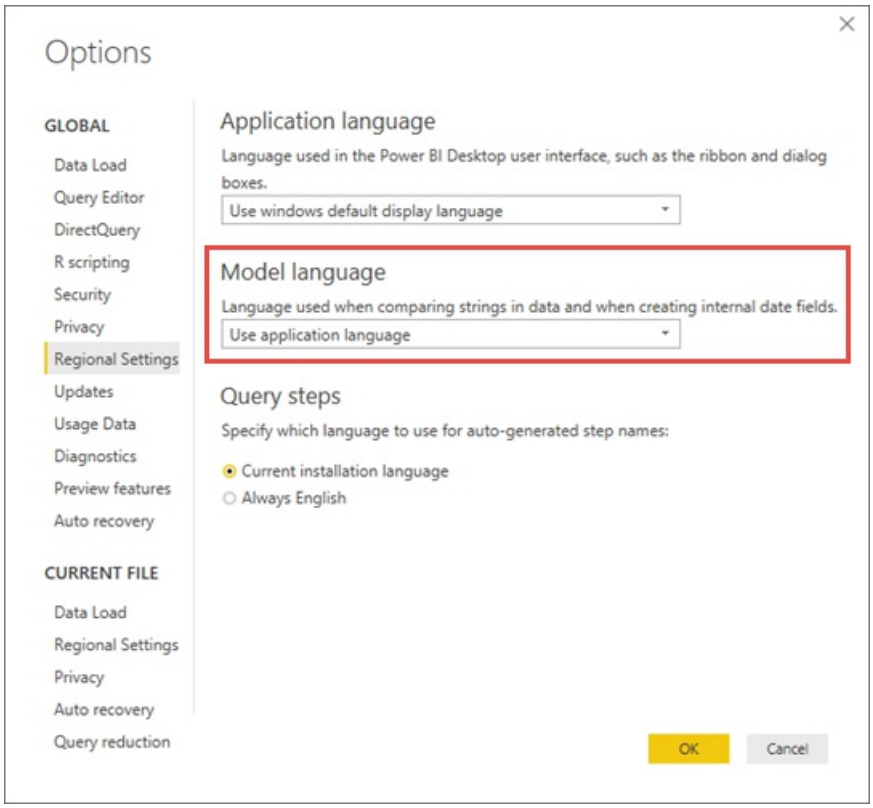
Besides setting the language for the Power BI Desktop application, you can also set the model language. The model language affects chiefly two things:

- 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.

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

3/5/2021 • 2 minutes to read • Edit Online

Power BI is designed to work with any of the supported browsers mentioned below. However, performance differs depending on your choice of a browser. If you're using Internet Explorer in particular, you may encounter worse performance. We strongly recommend switching from Internet Explorer to a modern browser, including 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
- Internet Explorer 11. Some advanced features, such as lineage view, aren't supported in Internet Explorer. See Data lineage (preview) for details.
- Chrome desktop latest version
- Safari Mac latest version
- Firefox desktop latest version. Firefox may change the fonts used in Power BI

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

Next steps

- What is Power BI?
- Ask the Power BI Community
- Still have an issue? Visit the Power BI support page

Power BI videos

3/5/2021 • 2 minutes to read • Edit Online

We have a YouTube channel for Power BI! You can visit our channel and, if you're new to Power BI a good place to start is the Analyze and Visualize data with Power BI playlist.

Here are a few videos from that playlist to get you started.

- Overview of Power BI service and Power BI Desktop.

  https://www.youtube.com/embed/l2wy4XgQIu0
- Collaborating and sharing.

  https://www.youtube.com/embed/5DABLeJzQYM
- Overview of Power BI mobile

  https://www.youtube.com/embed/07uBWhaCo78
- Power BI for developers

  https://www.youtube.com/embed/47uXJW1GIUY

Watch some of our new uploads

- Date slicer
- Custom visualizations
- Alerts in the Power BI service

More videos

Check out the following collection of sources and content for more videos.

- [Microsoft Learn for Power BI

Next steps

What is Power BI?

More questions? Try asking the Power BI Community

Power BI webinars

3/9/2021 • 6 minutes to read • Edit Online

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

Upcoming webinars

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
Register to watch on March 17 10AM-11AM PST

Quickstart Guide to Navigating Power BI
by Miguel Martinez
Register to watch on March 24 10AM-11AM PST

Upcoming webinars from the Power BI community

Featured webinars

Get started with these popular on-demand webinars:

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.

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 Hrncirik 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

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 Seamark
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

Power BI Desktop videos

3/5/2021 • 2 minutes to read • Edit Online

Power BI Desktop has a YouTube channel!

See a high-level overview of Power BI Desktop, from getting data and building a report, to sharing your report with others:

https://www.youtube.com/embed/Qgam9M8I0xA

Learn how to build stunning reports using Power BI Desktop:

https://www.youtube.com/embed/IMAsitQ2cAc

Import, reshape, and transform data using Power Query Editor:

https://www.youtube.com/embed/ByIUx-HmQbw

Select the following links to see all the videos available at the Power BI YouTube channel:

- Get started with Power BI Desktop
- Create a report in Power BI Desktop
- Use the Power Query Editor
- Create relationships between tables
- Publish from Power BI Desktop to the Power BI service
- Add a calculated column

Previous monthly updates to Power BI Desktop and the Power BI service

3/18/2021 • 116 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**.

February 2021 Update (2.90.303.0)

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 will no longer be supported on Windows 7 after January 31st, 2021. After that date, 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:

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:

- December 2020 version of Power BI Desktop - 32-bit
- December 2020 version of Power BI Desktop - 64-bit

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:

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:

- December 2020 version of Power BI Desktop - 32-bit
- December 2020 version of Power BI Desktop - 64-bit

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 will no longer be supported on Windows 7 after January 31st, 2021. After that date, 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:

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 2020 version of Power BI Desktop - 32-bit
- November 2020 version of Power BI Desktop - 64-bit

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 will no longer be supported on Windows 7 after January 31st, 2021. After that date, 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 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:

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 2020 version of Power BI Desktop - 32-bit
- October 2020 version of Power BI Desktop - 64-bit

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 will no longer be supported on Windows 7 after January 31st, 2021. After that date, 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:

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 2020 version of Power BI Desktop - 32-bit
- September 2020 version of Power BI Desktop - 64-bit

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 will no longer be supported on Windows 7 after January 31st, 2021. After that date, 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] [article] [blog]
- Automation Anywhere connector [video] [article] [blog]
- Acterys connector [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:

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 2020 version of Power BI Desktop - 32-bit
- August 2020 version of Power BI Desktop - 64-bit

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**
> Beginning with the September 2019 release, 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**
> Beginning with the September 2019 release, 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]
- Drill through 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**
> Beginning with the September 2019 release, 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**
> Beginning with the September 2019 release, 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**
> Beginning with the September 2019 release, 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**
> Beginning with the September 2019 release, 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**
> Beginning with the September 2019 release, 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**
> Beginning with the September 2019 release, 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 and 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**
> Beginning with the September 2019 release, 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 and 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]
- Drill-through 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 and 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

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.

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 and 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/l7OMRUF9UYg

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.

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 and 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 and 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/O8GlHDz8xUQ

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 and 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

- Drillthrough 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 and 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/rBPGH6eYlT0

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 and 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/AHNlkjRFdYI

> **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/Rzw2WyI09kY

> **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/Mtig3rmIUe0

> **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

> **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

> **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/kuI6MMzDh34

> **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 and 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 and 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 and 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 and 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 and 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:

- Drillthrough 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/moTQJInClJw

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/YlNVE5dgcSI

> **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/AWMaIaI8G2Y

> **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/CaRTON3lJqw

> **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

> **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/UXEYSvgvMaQ

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

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 and 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 long 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 layout 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/iW5VH8iIyfE

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 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 artifacts (Data Model, Queries, Power View) into a new Power BI Desktop file
- HDInsight Spark connector
- Azure 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/xJTcGro08TI

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 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

3/11/2021 • 2 minutes to read • Edit Online

This change log is for Power BI Desktop and lists new items along with bug fixes for each released build.

See What's new in Power BI for more information about new features.

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.
- Update of PBI Desktop save validation: 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.
- Model view fix for large .pbix files.
- Model view fix for blurry fields and icon text inside a table card.
- Color picker now 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

3/5/2021 • 3 minutes to read • Edit Online

Beginning with the March 2018 version of **Power BI Desktop**, 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

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- 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.

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