

Getting started with Power BI

Microsoft Power BI helps you stay up to date with the information that matters to you. In Power BI, your dashboards make it easy to open reports that you can explore in detail. Connecting to multiple datasets from Power BI helps you bring all of your relevant data together in one place.

If you have important data in Excel or CSV files, you can create a Power BI dashboard to stay informed anywhere—even with mobile devices—and share insights with others. If you're a data analyst, you'll find that Power BI is a powerful, flexible, and highly accessible tool to connect and shape data, build robust models, and craft well-structured reports.

Start working with your data in Power BI Desktop, which lets you create a collection of queries, data connections, and reports that can easily be shared with others. Power BI Desktop integrates proven Microsoft technologies—the powerful query engine, data modeling, and visualizations—and works seamlessly with the online Power BI service.

Power BI service

Power BI is an Office 365 app available to Microsoft full-time employees or contingent staff with a microsoft.com account. To sign in, go to app.powerbi.com. After you sign in to Power BI, you'll see the **Welcome to Power BI** page, with links to resources for getting started and exploring data.

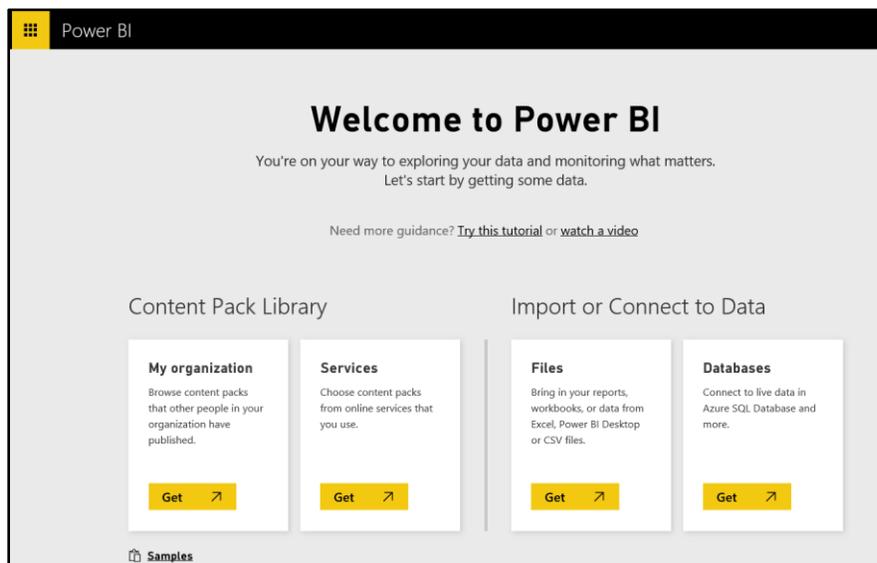


Figure 1. The Power BI welcome page

Under **Import or Connect to Data**, choose the **Get** button in the **Files** or **Databases** boxes to start working with data. This takes you to your My Workspace page, where you can connect to data in files, databases, data warehouses, or even import your own content.

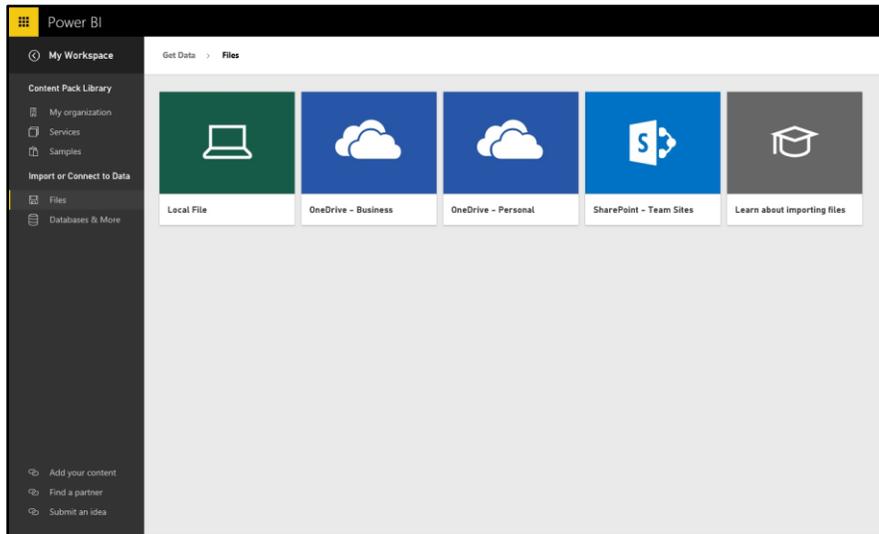


Figure 2. My Workspace in Power BI

In your workspace, you can connect to data sources and create reports, dashboards, KPIs, and more.

Dashboards in Power BI

In Power BI, you can create personalized dashboards to view your most important data at a glance. A dashboard combines on-premises and cloud-borne data in a single pane, providing a consolidated view across the organization regardless of where the data is stored. Each metric, or insight, is displayed on the dashboard as a tile.

Dashboard tiles

A tile is a snapshot of your data, pinned to the dashboard. You can create a tile from a report, dataset, dashboard, from the Q&A box, Excel, from SQL Server Reporting Services, and more. The image below shows many different tiles pinned to a dashboard.

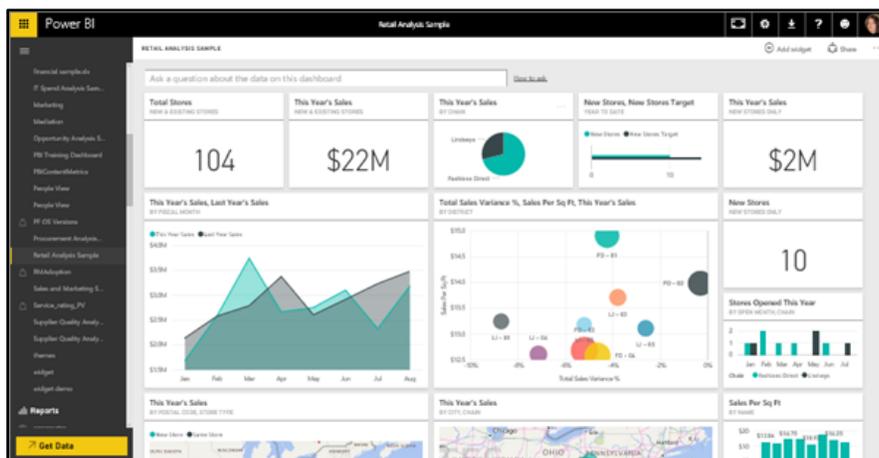


Figure 3. Dashboard tiles

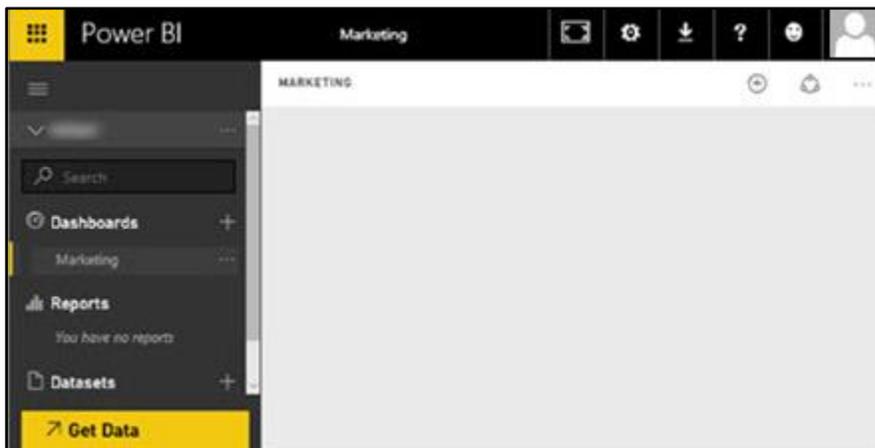
In addition to pinning, you can create standalone tiles directly on the dashboard by using the **Add tile** command at powerbi.microsoft.com/en-us/documentation/powerbi-service-add-a-tile-to-a-dashboard. Standalone tiles include text boxes, images, videos, and web content.

NOTE: If the original visualization used to create the tile changes, the tile doesn't change. For example, if you pinned a line chart from a report and then you change the line chart to a bar chart, the dashboard tile continues to show a line chart. The data refreshes, but the visualization type does not.

Create a dashboard

This method creates a new, empty, dashboard.

1. In the left navigation pane in Power BI (the service, not Power BI Desktop), select the plus sign **+** next to the **Dashboards** heading.
2. Type a name for your new dashboard and press **Enter**.
The new dashboard is created. You'll see it listed under **Dashboards** in the left navigation pane.
3. Select the new dashboard to make it the active dashboard. Notice that it's blank—it has no content yet.



Add some content to your new dashboard

There are many different ways to add content to your dashboard. You can:

- Connect to or import at least one dataset and pin content from that dataset to your dashboard.
- Add standalone content. For example, you can add an image, text box, heading, video, or web content.

TIP: Need some help getting started adding content? Check out *Step 1: Get data* in the *Get started with Power BI* tutorial at powerbi.microsoft.com/en-us/documentation/powerbi-service-get-started.

Get up and running

Ready to get started? Work through the *Guided learning for Power BI* tutorial at powerbi.microsoft.com/en-us/guided-learning. You can find a link to this tutorial and to the *Power BI in 60 seconds* video when you sign in on the Power BI home page at powerbi.com.

Do great things with data in Power BI Desktop

With Power BI Desktop, you connect to data, shape that data with queries that build data models, and use those data models to create reports that others can use, build upon, and share. If you're a data analyst delivering reports and analytics to your organization, Power BI Desktop lets you be productive and creative with what you build.

Power BI Desktop is a feature-rich data mashup and report authoring tool that lets you combine data from databases, files, and web services using visual tools that help you understand and fix data quality and formatting issues automatically. With over 20 built-in visuals and a vibrant community of custom visualizations, create stunning reports that communicate your message effectively.

As you add different sources to your data model, Query Editor detects relationships between tables and keeps track of the steps you apply to your data—you can even back out of changes you've made. After you've completed the steps to your satisfaction—connect, shape, and report—you can save that work in Power BI Desktop file format, which is the .pbix extension. Power BI Desktop files can be shared like any other file, but the most compelling way to share Power BI Desktop files is to upload and share them on the Power BI service.

Download and install Power BI Desktop

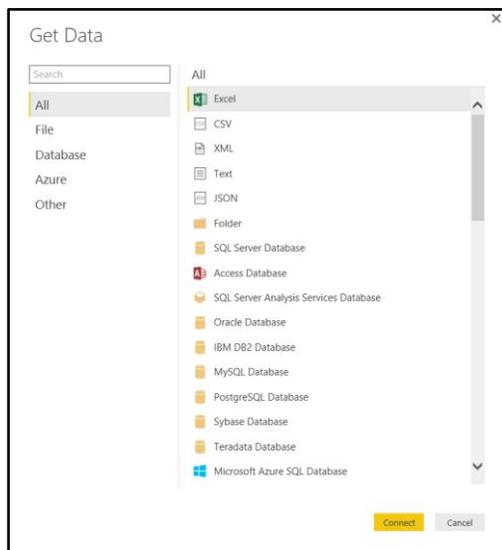
Before you start using Power BI Desktop, you need to download and install it on your computer. See *Get Power BI Desktop* at powerbi.microsoft.com/en-us/documentation/powerbi-desktop-get-the-desktop. After you've installed Power BI Desktop, you can access it from your desktop or the Windows Start screen.

Find and connect to a data source

1. Start Power BI Desktop.

If you didn't change any settings when you ran the Power BI Desktop installation, you should see the icon for Power BI Desktop  on your Windows desktop or Start screen.

2. On the **Home** tab, select **Get Data** to see a list of all available data source types. Notice that the data source types are separated into five categories: **All**, **File**, **Database**, **Azure**, and **Other**.



Alternatively, you can select the down arrow next to **Get Data** to see a shorter list of commonly used data types.

3. Select the type of data source you want to connect to, and then follow the steps in the wizard.

The next section of this guide shows you how to create a dynamic connection to an Excel workbook. In another section, you'll learn how to connect to data on a web page.

Other data sources

There are several other data sources available—online services, data warehouses, and more. You'll see all the choices when you use the **Get Data** dialog box to connect to a data source. To see all the tools and techniques available for connecting to data from Power BI Desktop, expand the "Connect to data" section in the left pane of the online help article, *Getting started with Power BI Desktop* at powerbi.microsoft.com/en-us/documentation/powerbi-desktop-getting-started.

Connect to an Excel workbook

1. In the **Get Data** dialog box, select **Excel**, then select **Connect**.
2. Browse to your workbook, and then select **Open**.

The **Navigator** window appears.

3. Select the objects in the workbook you want to include in the data connection, such as sheets or tables.

If you select **Edit** before you load the data, you can perform cleanup operations on your columns of data, such as filtering, sorting, transforming, or changing the data type. See the section [Shaping and combining data](#) for more information about transforming data.

4. Select **Load**.
5. Select **Save As** on the **File** menu to save your data connection as a Power BI file (.pbix file name extension).

Connect to data on a web page

1. In the **Get Data** dialog box, select **Web**.
2. Enter the path to the web page in the **URL** box, and then select **OK**.

The **Navigator** window appears.

3. Select the table(s) that you want to include in the data connection.

*NOTE: You can ignore the **Document** object, as it contains only metadata about the web page.*

If you select **Edit** before you load the data, you can perform cleanup operations on your columns of data, such as filtering, sorting, transforming, or changing the data type. See the next section in this guide for more information about transforming data.

4. Select **Load**.
5. Select **Save As** on the **File** menu to save your data connection as a Power BI file (.pbix file name extension).

Shaping and combining data

With Power BI Desktop, you can connect to many different types of data sources, and then shape the data to meet your needs. Shaping data means transforming the data—such as renaming columns or tables, changing text to numbers, removing rows, or setting the values in the first row as column headers. Combining data means connecting to two or more data sources, shaping them as needed, then consolidating them into one useful query.

When you load data into Power BI Desktop, it attempts to convert the data type of the source column into a data type that better supports efficient storage, calculations, and data visualization. For example, if a column of values has no fractional values, Power BI Desktop converts the entire column of data to a Whole Number data type.

When you shape data in the Query Editor, you're providing step-by-step instructions that Query Editor uses to adjust how the data is shown. The original data is not affected; only this particular view of the data is adjusted, or shaped.

The steps you specify (such as rename a table, transform a data type, or delete columns) are recorded by Query Editor, and each time this query connects to the data source, those steps are carried out.

After you import data, you might find errors. In Query Editor, you can find these errors and fix them, or change the data types of columns of data as needed. To learn more, see *Shape and combine data in Power BI Desktop* at powerbi.microsoft.com/en-us/documentation/powerbi-desktop-shape-and-combine-data.

Model your data

Power BI Desktop provides advanced data modeling features like auto-detect and manual relationships, custom measures, calculated columns, data categorization, and sort by column. Data View makes seeing the data in your model easy, and with Relationship View, you get a customizable diagram view of all your tables and the relationships between them.

Create reports

A report is a multi-perspective view into your data, with visualizations that represent different findings and insights from that data. A report can have a single visualization, or pages full of visualizations.

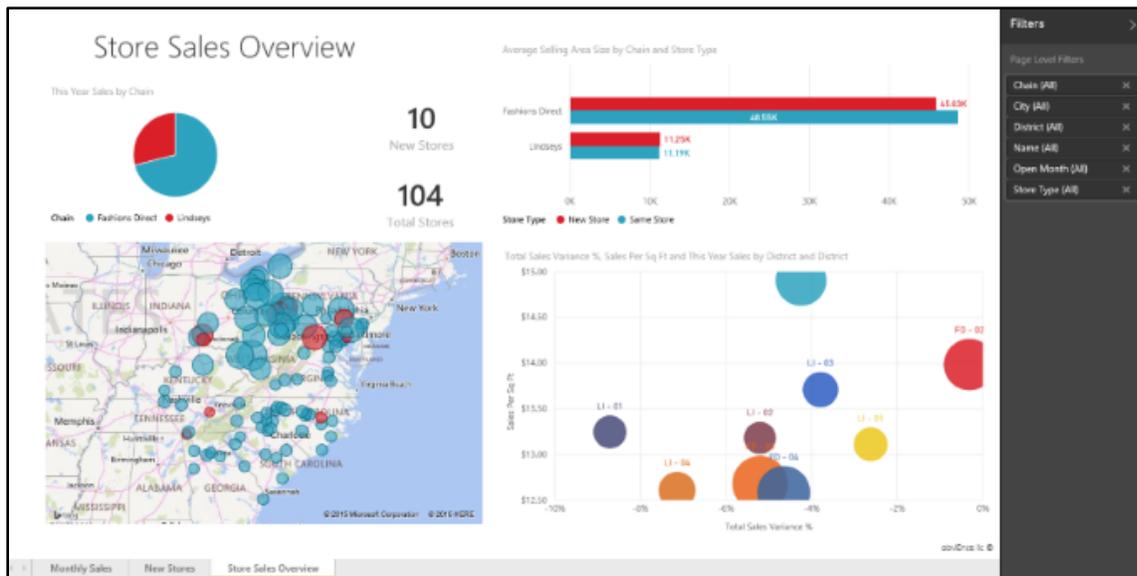


Figure 6. A Power BI report

See *Report view in Power BI Desktop* at powerbi.microsoft.com/en-us/documentation/powerbi-desktop-report-view to learn more about creating compelling and powerful reports.

View reports in the navigation pane

Power BI can have more than one report—as you add reports, their titles are added to the list. Note that only one report can be open at a time.

Power BI Mobile for productivity on the go

Stay connected to your data from anywhere, anytime with Microsoft Power BI Mobile. Give viewing and interacting with your Power BI dashboards, KPIs, and various reports a try on your mobile device—be it iOS (iPad or iPhone), Apple Watch, Android phone, or a Windows 10 device.

For a comprehensive guide, see *Power BI apps for mobile devices* at powerbi.microsoft.com/en-us/documentation/powerbi-power-bi-apps-for-mobile-devices. The following list provides links to content about the mobile devices that support Power BI.

- Learn about the iPhone app (Power BI for iOS): [Get started with the Power BI for iOS app on an iPhone or iPod Touch](#)
- Learn about the iPad app (Power BI for iOS): [Get started with the iPad app \(Power BI for iOS\)](#)
- Learn about Power BI app for Android phones: [Get started with the Power BI for Android app](#)
- Learn about Power BI app for Windows 10 devices: [Get started with the Power BI mobile app for Windows 10](#)

For more information

Guided learning for Power BI

powerbi.microsoft.com/en-us/guided-learning

Power BI Service—basic concepts

powerbi.microsoft.com/en-us/documentation/powerbi-service-basic-concepts

Getting started with Power BI Desktop

powerbi.microsoft.com/en-us/documentation/powerbi-desktop-getting-started

Power BI Mobile Apps

powerbi.microsoft.com/en-us/documentation/powerbi-power-bi-apps-for-mobile-devices

Microsoft IT Showcase

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