

A Step by Step Guide to Power BI On-Premises Data Refresh

On-premises Schedule Data Refresh of Power BI reports and dashboards is a powerful and very simple feature to set up in PowerBI.com. Once set up, it enables data sources that have been set up in, or published to, PowerBI.com. To refresh themselves on a predetermined schedule from data sources, both hosted in the cloud (e.g. SQL Azure, Salesforce, etc.), and data sources in your on-premises environments (think: the new data warehouse just built for Marketing, or those Excel files containing last quarter's sales trends).

In this white paper, we'll talk about what you need to set up and start using scheduled data refresh in your environment and walk through all the steps required to get you and your organization started. We recommend following along and building a proof of concept so you can wow everyone in your organization with your cutting edge data visualization skills!

First Things First

This is a beginner's guide, and intended for anyone who has seen Power BI, is interested in learning more, and has some familiarity with how data works (e.g., tables, columns and such).

If you're unsure about any particular terminology used in this paper, there is a fantastic community out there already and a plethora of information for getting started in any of these tools. Links to outside resources for additional information are also included where possible. And of course feel free to reach out to us at DesignMind for more information on bringing Power BI to your organization.

Since we'll be covering the Schedule Data Refresh aspect of Power BI in this guide, we'll assume a working knowledge of [Power BI.com](#) (just set up an account and look around if you haven't yet) as well as the ability to access data from your sources using Power BI Desktop or Power BI for Excel. [First, go to this page to download and get started with Power BI Desktop](#). This guide will focus on using Power BI Desktop.



About DesignMind

DesignMind is a Big Data, Business Intelligence, and Data Analytics consulting company headquartered in San Francisco.

Supported Data Sources

Here is the list of supported data sources as of this writing. Microsoft has stated that they'll be adding sources and updating this list frequently, so make sure to check [the Microsoft Power BI Support page](#) for the most up to date information.

SUPPORTED ON-PREMISES DATA SOURCES:

- Access Database
- Custom SQL/Native SQL
- File (CSV, XML, Text, Excel, Folder)
- IBM DB2 Database
- MySQL Database
- Oracle Database
- PostgreSQL Database
- SharePoint List
- SQL Server Database
- Sybase Database
- Teradata Database

SUPPORTED ONLINE DATA SOURCES:

- AppFigures (Beta)
- Azure Blob store
- Azure HD Insight
- Azure Marketplace
- Azure SQL Database
- Azure Table store

BLANK QUERY (QUERY THAT IS NOT ACCESSING ANY DATA SOURCE):

- Dynamics CRM Online
- Facebook
- GitHub (Beta)
- Google Analytics
- Hadoop File (HDFS)
- OData Feed
- Salesforce
- Sweet IQ (Beta)
- Twilio (Beta)
- QuickBooks Online (Beta)
- Web
- Zendesk (Beta)



How it Works

There are three tools involved in setting up Schedule Data Refresh from an on-premises data source. These are:

1. POWERBI.COM

Your reports publishing portal, and where you'll configure your refresh schedules.

2. POWER BI DESKTOP OR POWER BI FOR EXCEL

These are the interchangeable Power BI report development tools. Both are free and easy to use. This is where you'll initially connect to your data, then prepare it and develop your reports.

3. PERSONAL DATA MANAGEMENT GATEWAY

This tool will form the bridge between your PowerBI.com portal, and your on-premises data source. This is not needed if you are scheduling a refresh from a cloud data source, so skip this step if you are connecting to one of these.

After setting up an account at PowerBI.com, you can download both the Desktop and Gateway tools for free. During installation, the Gateway will request both your PowerBI.com credentials and your Windows credentials, so that it can access the data sources you are connecting to without requiring you to log in to the source each time.

This means that as long as the computer hosting your data source has both the Gateway installed and is on, Power BI will be able to refresh from it without your needing to be logged in or giving it permission each time. You can find detailed information on the Personal Data Management Gateway and the service it provides [on the Power BI Personal Gateway page](#).

"After setting up an account at [PowerBI.com](#), you can download both the Desktop and Gateway tools for free."



Let's Get Started Already!

INSTALL

Once you have an account, have set up and installed Power BI Desktop (or Power BI for Excel) and the Personal Data Management Gateway, you're ready to get started!

DEVELOP

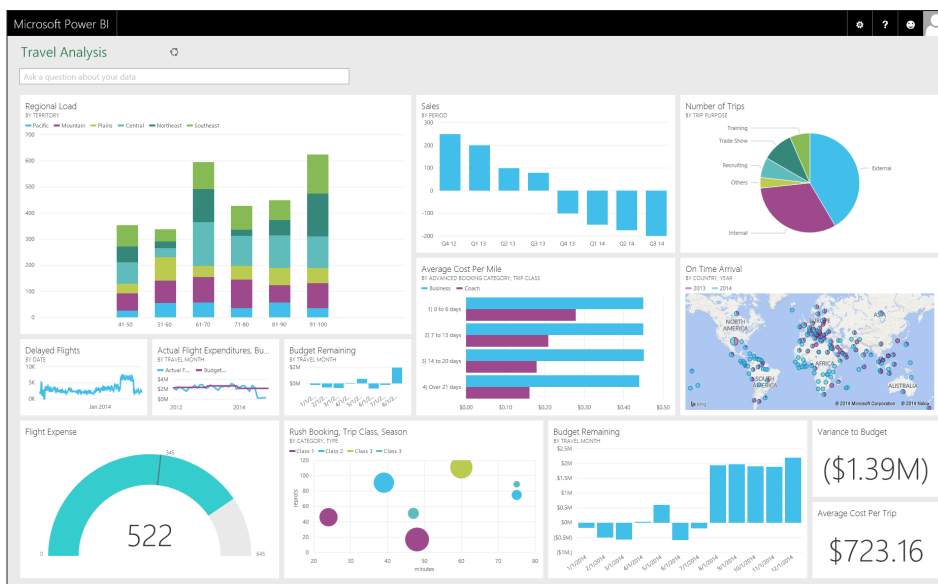
First, connect to your desired (and supported) on-premises data source from Power BI Desktop. You can clean that data using the Query tools available to you now, or leave it as is if it's ready to be used. Each time your data is refreshed it will go through the same cleaning steps that you build here.

Next, create a report, or not. Either way, when we go to upload this Power BI workbook to PowerBI.com, both the data source and any reports you created will be uploaded. If you choose not to create a report, a blank one will be uploaded anyway. Don't worry, PowerBI.com allows you to author new reports and modify existing ones from the web browser. Plus, new authoring features are being added all the time.

PUBLISH

Finally, when you're ready to upload your workbook, click on the 'Publish' button in your Power BI Desktop toolbar. If you've not used this before, it will prompt you for your PowerBI.com credentials and then will publish your content. Once this is done, our development work is over and we can go see our reports in our PowerBI.com portal.

"PowerBI.com allows you to both author new reports and modify existing ones from the web browser..."



SCHEDULE

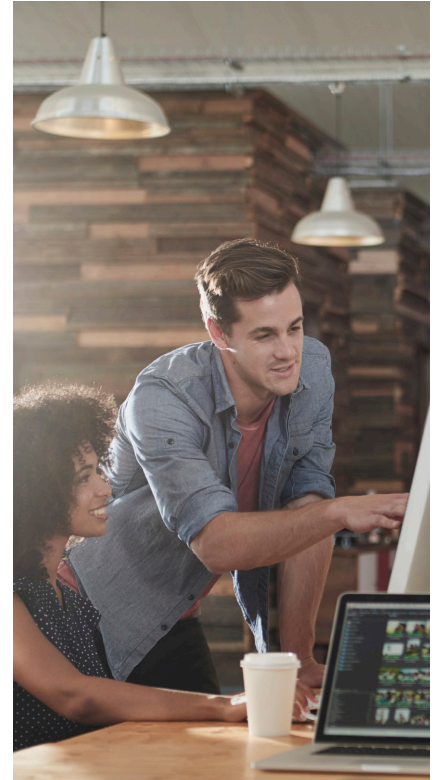
Open up your PowerBI.com portal and note the new report(s) and data sources that were added when you published your Power BI Desktop workbook. We'll schedule the data refresh on the data source and the affects will cascade down the reports that you created on this source today, as well as any that you may create on it later.

So click on the ellipses button (...) next to your new data source, and select "Schedule Refresh". This will take you out to your data source configuration window. If you installed and configured your Gateway correctly, you will see a setting group in the right pane called "Gateway Status". This will tell you the status of the Gateway you installed and will let you know if anything has gone wrong (e.g. the computer is off).

Just below this, you'll see a "Schedule Refresh" group. Turn the "Keep your data up-to-date" switch on, choose the schedule you want the data source to refresh on, and click "Apply", and you're done!

DONE!

The data source will now refresh on the schedule you specified, using your Windows Credentials to access the source, and you'll always have up to date reports and dashboards that you can quickly access through your PowerBI portal or your mobile app. It's as easy as that.



So What's Next?

What comes next? Well, the first thing we recommend looking into next, is what data sources your organization has – whether they are cloud or on-premises and currently supported – and what your organization's needs are for BI and reporting capabilities. Do you need fast, powerful, attractive, and free data visualization delivered through an always available web portal, with data that's always kept up to date? Who doesn't?

So explore the tool a little more for yourself. Build a proof-of-concept or reach out to us and find out more about how Power BI and its new powerful free offerings might be right for you.

Eric Bragas and Angel Abundez use Power BI, Tableau, and SQL Server Reporting Services to help businesses gain insights into their data.