

Getting Up and Running with the Power BI Service

Setup Time: 60 minutes

Lab Folder: C:\Student\Modules\01_IntroToPowerBI\Lab

Overview: This lab covers how to get up and running with Power BI by creating a new Office 365 tenant with trial subscriptions to Office 365 and Power BI Pro. The act of creating and configuring this new Office 365 tenant will yield an isolated testing and development environment for working on projects with the Power BI service and using Microsoft's latest self-service BI tools such as Power BI Desktop and Microsoft Excel 2016. One valuable aspect of creating a new and isolated Office 365 tenant is that you will have tenant-level administrative permissions allowing you to configure the tenant with multiple user accounts for testing your Power BI projects in isolation from any existing Office 365 tenancy.

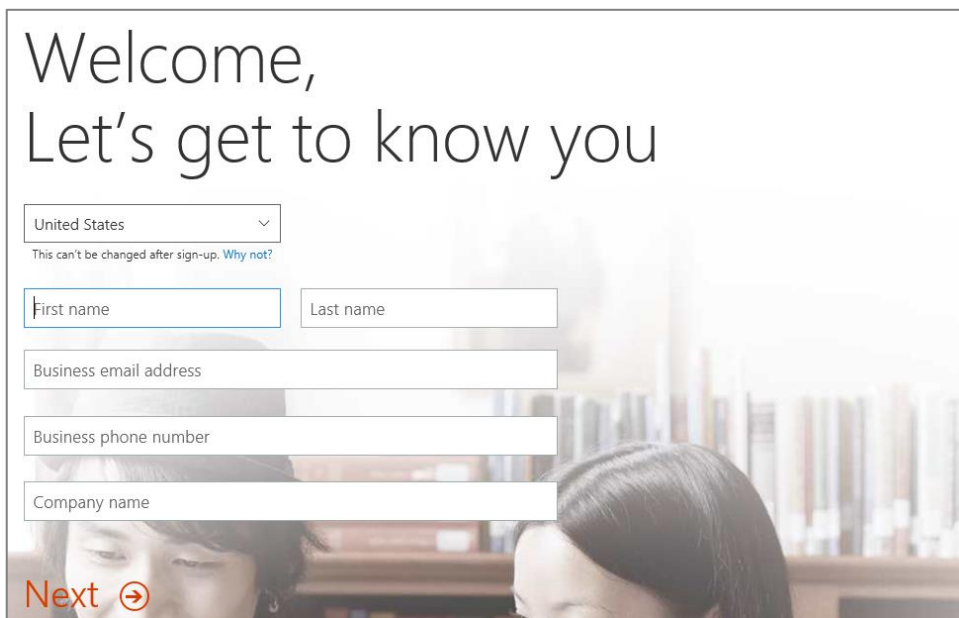
Exercise 1: Create a new Office 365 Trial Tenant

In this exercise, you will create a new Office 365 tenant which allows you to create up to 25 user accounts with Enterprise E5 trial licenses. Note that the Enterprise E5 trial license provides the benefits of the Power BI Pro license. Being able to create multiple Office 365 user accounts in your Power BI testing environment will be important so that you can test the effects of sharing Power BI dashboards between users.

1. Navigate to the following URL:

<https://go.microsoft.com/fwlink/p/?LinkID=698279&culture=en-US&country=US>

2. Fill out the form with your personal information and click **Next**.



The screenshot shows the Microsoft Office 365 sign-up page. At the top, it says 'Welcome, Let's get to know you'. Below this is a dropdown menu for 'United States' with a note 'This can't be changed after sign-up. Why not?'. There are five input fields: 'First name', 'Last name', 'Business email address', 'Business phone number', and 'Company name'. At the bottom left, there is a 'Next' button with a right arrow icon. The background of the form is a blurred image of two people looking at a screen.

The information you provide here will be used throughout your tenant so if you do not wish to use your actual company name then provide humorous and fictitious company name. The name you use for company name will turn out to be the name of the trial Office 365 tenant that you are creating.

3. On the next page, you are prompted to provide a user ID, company name and password.

Note that the company name you enter on this page will be used to create the domain name for your new Office 365 trial tenant. For example, if you were to enter a company name of **CptPowerBiTenant**, it would result in the creation of a new Office 365 tenant within a domain of **CptPowerBiTenant.onMicrosoft.com**. The user name you enter will be used to create the first user account which will be given administrative rights within the trial tenant. If you enter a user name of **Student**, then the email address as well as user principal name for this account will be **Student@CptPowerBiTenant.onMicrosoft.com**.

4. Enter a user name and a company name for your new Office 365 trial tenant. For the company name, you may wish to simply use your first and/or last name with a number which you can increment each time you have to create a new trial account (e.g. EricClapton1.onmicrosoft.com).

The screenshot shows the 'Create your user ID' page for an Office 365 Enterprise E5 Trial. At the top left is a red banner with the text 'Office 365 Enterprise E5 Trial'. At the top right, there is a link 'Want to add this to an existing subscription?' and a 'Sign in' button. The main heading is 'Create your user ID' with a subtext 'You need a user ID and password to sign in to your account.' Below this, there are input fields for 'Student' (with a dropdown arrow) and 'CptPowerBiTenant.onmicrosoft.com'. A green checkmark icon is shown next to the email address 'Student@CptPowerBiTenant.onmicrosoft.com'. There are two password fields, each with a strength indicator (dots). At the bottom, there is a link 'terms and conditions' and a 'Create my account' button with a right arrow icon.

Don't use your actual company name as that may cause some conflict when your company decides to create their own official tenant. Throughout the remainder of this guide you will see a company domain name of **CptPowerBiTenant** which you should replace with the value specified for your company name.

5. Click **Next** to continue to step 3.
6. Complete the validation form in step 3 by proving you are not a robot.
- a) Select the **Text me** option and provide the number of your mobile phone.
 - b) When you go through this process, a Microsoft service will send you a text message that contains an access code.
 - c) You retrieve the access code from your mobile device and use it to complete the validation process.

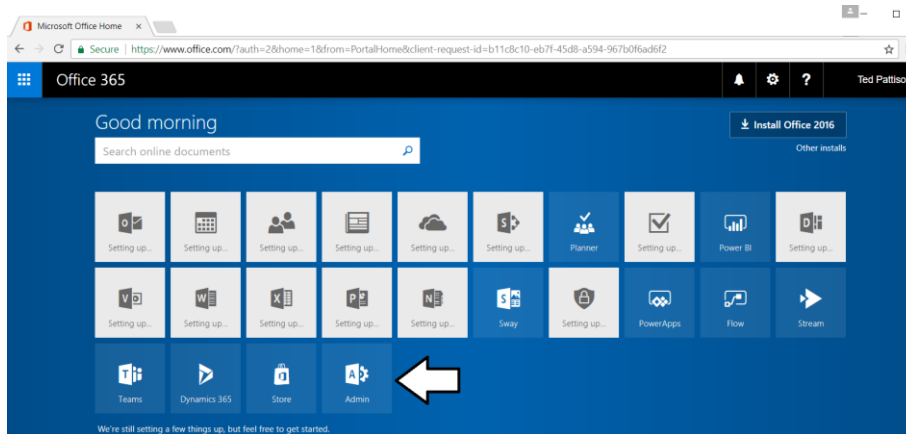
The screenshot shows the 'Prove. You're. Not. A. Robot.' validation page. It has a heading 'Prove. You're. Not. A. Robot.' and two radio buttons: 'Text me' (selected) and 'Call me'. Below the radio buttons is a phone number input field with a dropdown arrow for the country code '(+1)'. At the bottom, there is a 'Text me' button with a right arrow icon.

7. Once you have completed the validation process, click the **You're ready to go...** link to navigate to the portal welcome page for your new Office 365 trial tenant. Note that you should already be logged on using the user account that was created during the sign up process.

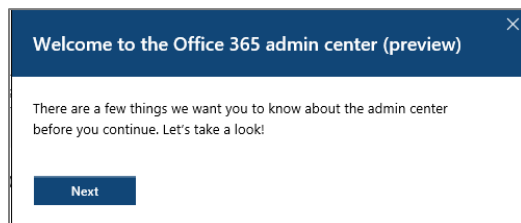
The screenshot shows the 'Save this info. You'll need it later.' page. It has a heading 'Save this info. You'll need it later.' and two links: 'Sign-in page' with the URL 'https://portal.office.com' and 'Your user ID' with the email address 'Student@CptPowerBiTenant.onmicrosoft.com'. At the bottom, there is a 'You're ready to go...' button with a right arrow icon.

At this point, you have already created your new Office 365 tenant which can support creating up to 25 user accounts with Office 365 Enterprise E5 trial licenses. Note that some Office 365 services within your new Office 365 tenant such as the Office 365 admin center can be accessed immediately. Other services within your Office 365 tenant such as SharePoint Online are not ready immediately and will take some time to provision.

8. At this point, you should be located on the portal welcome page of Office 365. You will notice that this page shows the progress of the Office 365 environment in setting up each of the individual services that make up your new Office 365 tenant. Click the **Admin** tile to proceed to the **Office 365 admin center**.

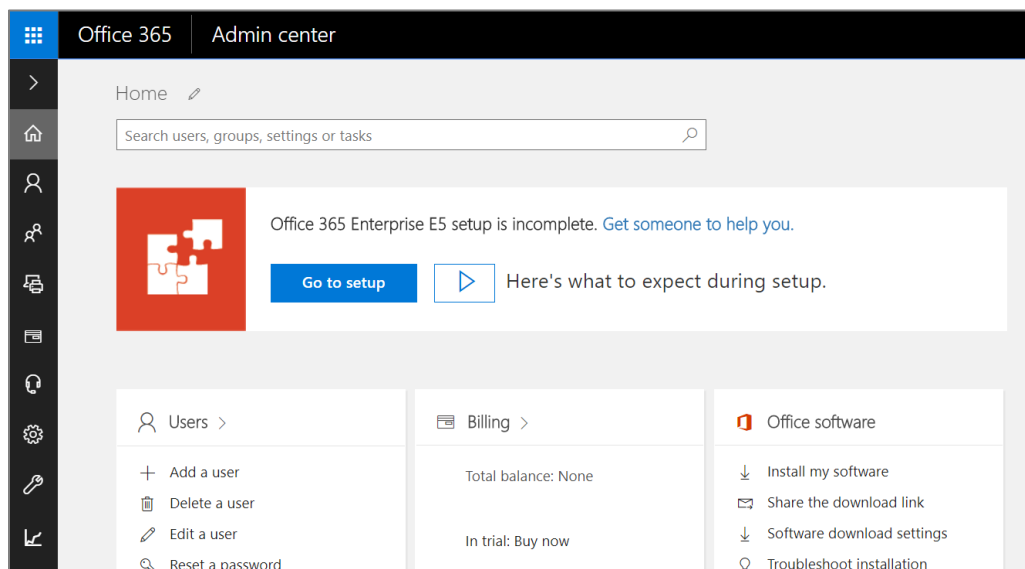


9. If you are presented with the Office 365 admin center welcome dialog, close it by clicking the **X** menu in the upper right corner.



10. Navigate around in the **Office 365 admin center**.

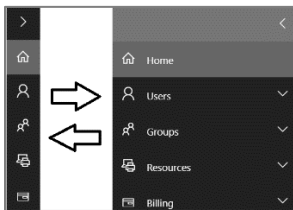
- a) You should now be inside the Office 365 Admin center which allows you to administrate the current Office 365 tenant.



- b) Locate the top **Menu** button for the left navigation menu which sits just beneath the Office 365 App Launcher menu button.



- c) Click the top **Menu** button several times and see how it toggles the left navigation between a collapsed and expanded mode.

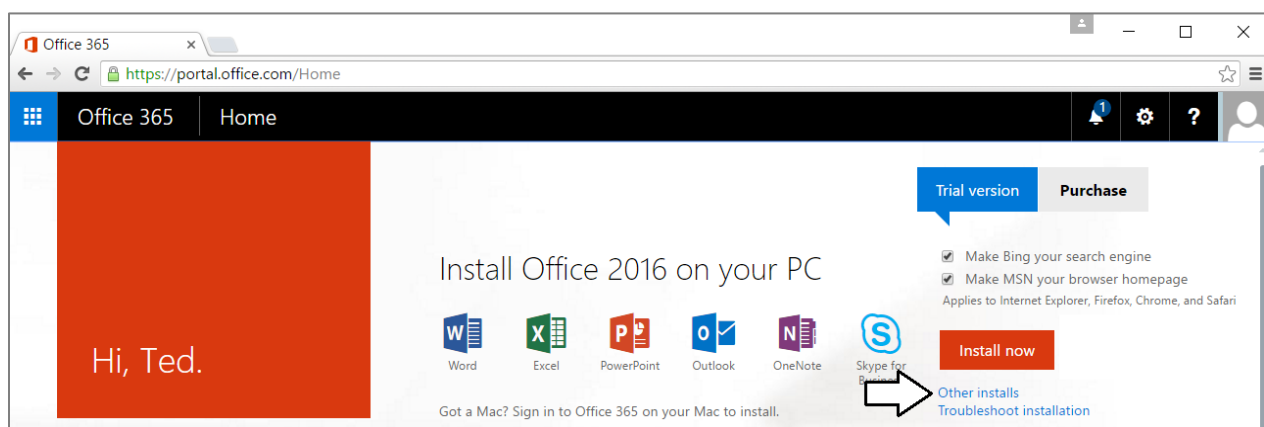


If you are interested in getting more familiar with the **Office 365 admin center**, take a minute to explore the administrative pages behind the left navigation menu in the Office 365 admin center.

Exercise 2: Install the Desktop Version of Microsoft Office 2016 Pro

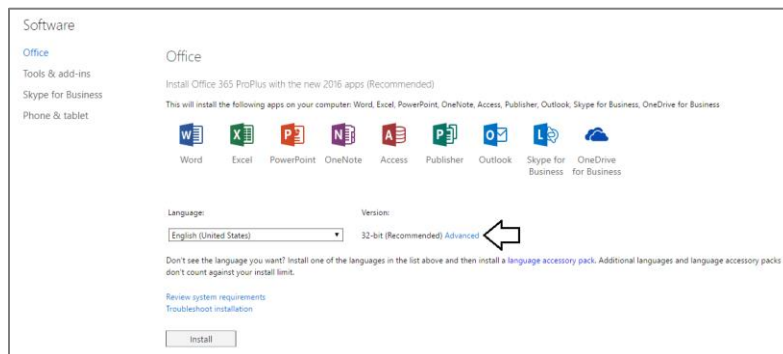
Note you only need to complete this exercise if you do not have Microsoft Excel installed on your PC. It is fine to use either Excel 2016 or Excel 2013. If you do not already have Excel installed, you can install Office 2016 from the Office 365 admin portal. In this exercise you will install Office 2016 Pro using software downloaded directly from the Office 365 portal. The main reason you need to install Office 2016 Pro is that you will be using Microsoft Excel in later lab exercises.

1. Install the Office 2016 client applications.
 - a) In the browser, navigate to <https://portal.office.com>.
 - b) Locate and click on the **Other Installs** link on the page.

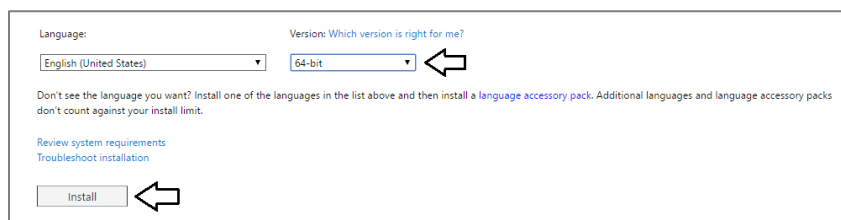


Don't click the **Install Now** button. That will install the 32-bit version of Office 2016 when instead you want to install the 64-bit version.

- c) You should now be at the **Office** tab of the **Software** page. Locate and click the **Advanced** link to set the installation option to install the 64-bit version of Office 2016 instead of the 32-bit version.



- d) Use the dropdown menu to change the Version setting to **64 bit**. And then click the **Install** button to begin the installation.



- e) Follow the instructions to install Office 2016.

Note that you can move on to the next exercise and continue working while you're waiting for the Office 2016 installation to complete.

2. When you see the Success dialog indicating the installation of Office 2016 Pro is completed, complete the following steps.
 - a) Launch Microsoft Excel to verify the installation of Office 2016 Pro.
 - b) When prompted to activate Office 2016 Pro, use the email of your new Office 365 account to complete the activation process.

Exercise 3: Upload a Workbook with Sample Data to OneDrive for Business

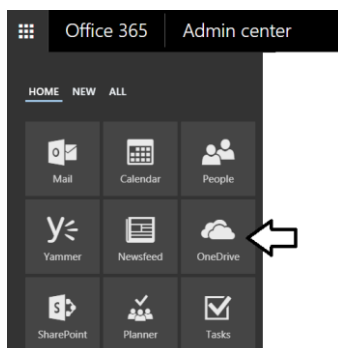
In this exercise, you will upload an Excel workbook file containing sample data to OneDrive for Business. However, the first step will be to download a copy of the sample Excel workbook to your local hard drive.

1. Ensure you have downloaded the **Student.zip** file associated with this training course and extracted the contents of this zip archive into a local direct at **C:\Student**.
2. Locate the sample Excel workbook file at the following path.

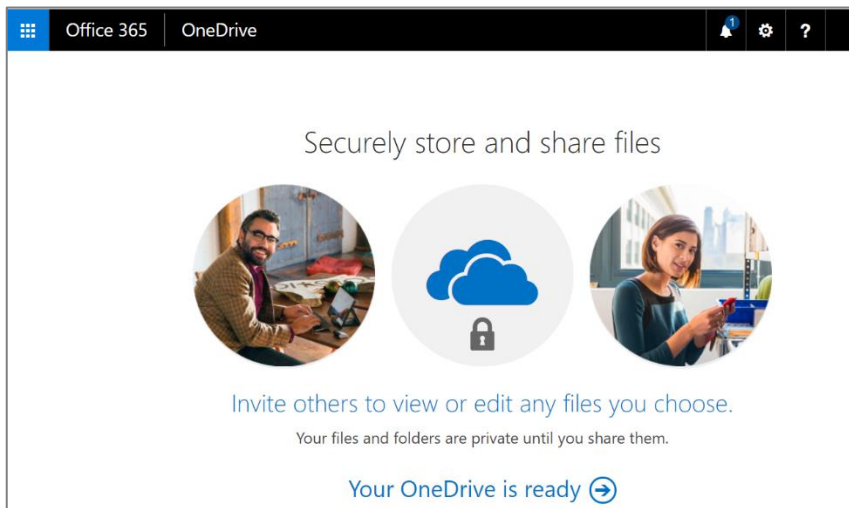
C:\Student\Data\WingtipsSalesData.xlsx

You can also download this file from <https://github.com/CriticalPathTraining/PBI365/raw/master/Student/Data/WingtipSalesData.xlsx>

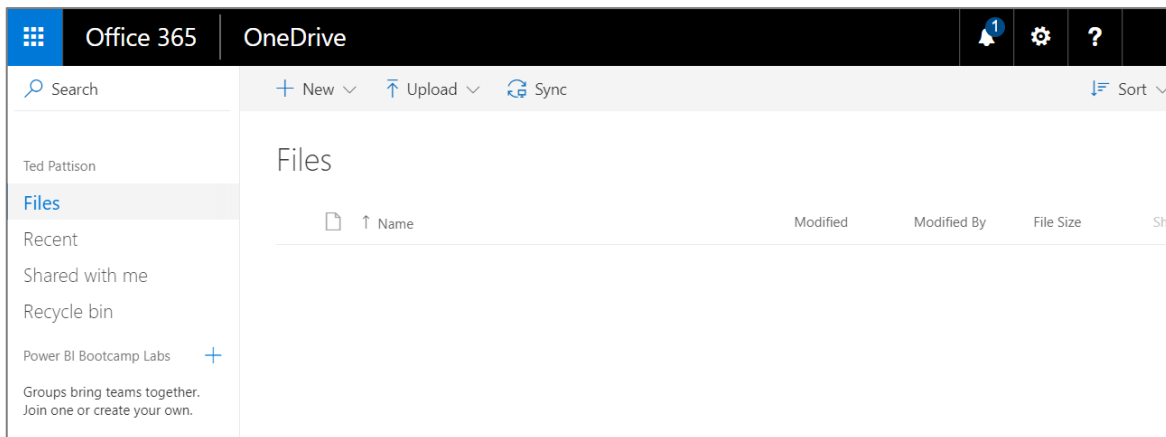
3. Open OneDrive for Business by clicking the **OneDrive** icon in the Office 365 App Launcher.



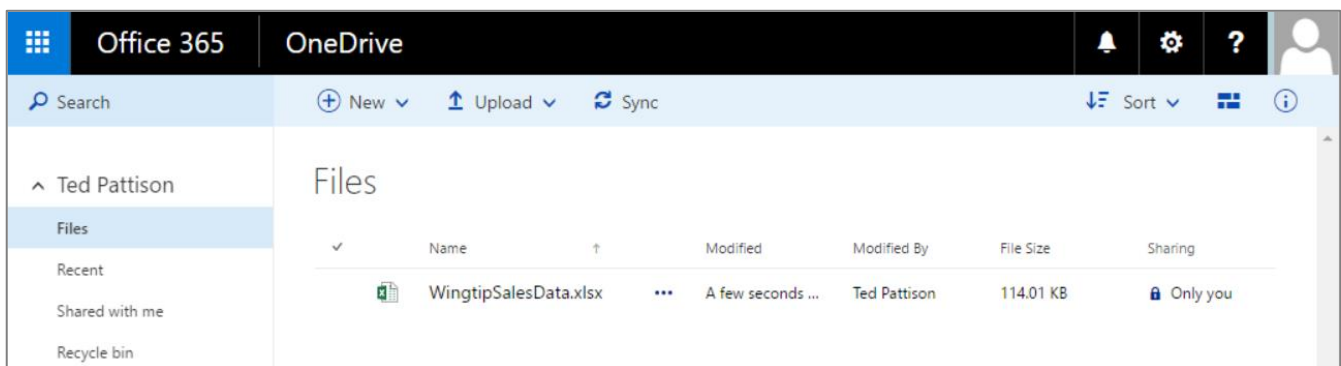
4. If you are prompted by the **Get the most out of SharePoint** dialog, click **No Thanks** button to dismiss this dialog.
5. When you navigate to OneDrive for Business and see the following page, click the **Your OneDrive is Ready** link.



6. Next, you will see a **Welcome to OneDrive** dialog with a **Let's get you started** message. Click the **X** in the top right to close it.
7. You should now be at the main landing page for **OneDrive for Business** which displays the **Documents** library.



8. Click the **Upload** button and go through the steps to upload the local copy of **WingtipSalesData.xlsx** to the **Documents** library. Once you have completed this step, you should be able to verify that the **Documents** library contains **WingtipSalesData.xlsx**.



- Inside the **Documents** library, locate and click on the **WingtipSalesData** link to open the workbook in Excel Online. As you can see, the workbook contains a sample set of tabular data that will be used in a later exercise.

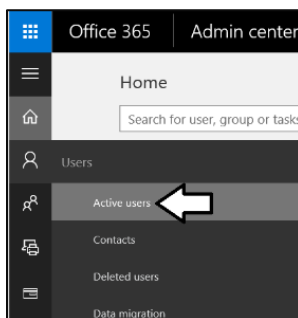
| Fiscal Year | Sales Region | State | Category | Subcategory | Product | Sales Revenue |
|-------------|----------------|-------|-------------------------|-------------------|------------------------------------|---------------|
| FY 2012 | Western Region | AZ | Action Figures | Cute and Huggable | Black Power Ranger Action Figure | \$52.50 |
| FY 2012 | Western Region | AZ | Action Figures | Cute and Huggable | Green Angry Bird Action Figure | \$158.40 |
| FY 2012 | Western Region | AZ | Action Figures | Cute and Huggable | Perry the Platypus Action Figure | \$1,777.95 |
| FY 2012 | Western Region | AZ | Action Figures | Cute and Huggable | Phineas and Ferb Action Figure Set | \$937.65 |
| FY 2012 | Western Region | AZ | Action Figures | Cute and Huggable | Twitter Follower Action Figure | \$660.00 |
| FY 2012 | Western Region | AZ | Action Figures | Cute and Huggable | Woody Action Figure | \$467.65 |
| FY 2012 | Western Region | AZ | Action Figures | Tough Guys | Batman Action Figure | \$1,375.40 |
| FY 2012 | Western Region | AZ | Action Figures | Tough Guys | Captain America Action Figure | \$3,354.05 |
| FY 2012 | Western Region | AZ | Action Figures | Tough Guys | GI Joe Action Figure | \$1,031.55 |
| FY 2012 | Western Region | AZ | Action Figures | Tough Guys | Godzilla Action Figure | \$9,396.45 |
| FY 2012 | Western Region | AZ | Action Figures | Tough Guys | Green Hulk Action Figure | \$1,343.25 |
| FY 2012 | Western Region | AZ | Action Figures | Tough Guys | Red Hulk Alter Ego Action Figure | \$19.90 |
| FY 2012 | Western Region | AZ | Action Figures | Tough Guys | Spiderman Action Figure | \$2,965.55 |
| FY 2012 | Western Region | AZ | Arts and Crafts | Drawing | Crate o' Crayons | \$4,066.40 |
| FY 2012 | Western Region | AZ | Arts and Crafts | Drawing | Crayola Crayon Set | \$408.36 |
| FY 2012 | Western Region | AZ | Arts and Crafts | Drawing | Etch A Sketch | \$9,971.50 |
| FY 2012 | Western Region | AZ | Arts and Crafts | Drawing | Sponge Bob Coloring Book | \$1,067.90 |
| FY 2012 | Western Region | AZ | Arts and Crafts | Painting | Easel with Supply Trays | \$32,317.65 |
| FY 2012 | Western Region | AZ | Remote Control Vehicles | Boats | Turbo-boost Speedboat | \$823.75 |
| FY 2012 | Western Region | AZ | Remote Control Vehicles | Cars | Green Hornet | \$224.55 |
| FY 2012 | Western Region | AZ | Remote Control Vehicles | Cars | Indy Race Car | \$3,790.50 |
| FY 2012 | Western Region | AZ | Remote Control Vehicles | Planes | Flying Badger | \$4,276.35 |
| FY 2012 | Western Region | AZ | Remote Control Vehicles | Planes | Flying Squirrel | \$6,575.30 |
| FY 2012 | Western Region | AZ | Remote Control Vehicles | Planes | FOX News Chopper | \$179.70 |
| FY 2012 | Western Region | AZ | Remote Control Vehicles | Planes | Red Barron von Richthofen | \$1,120.30 |

Now you have uploaded an Excel workbook with sample data to a OneDrive for Business site. In an upcoming exercise, you will use the data inside this Excel workbook to create a dataset, a report and a dashboard in the Power BI service.

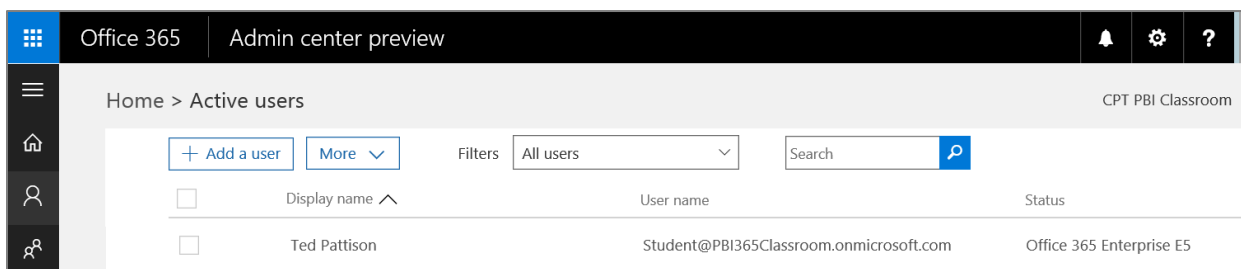
Exercise 4: Add a Secondary User Account for Testing Purposes

In this exercise, you will configure your new Office 365 tenant by creating a secondary user account that you will need later when you begin experimenting with the Power BI dashboard sharing process.

- Return to Office 365 admin center by clicking the **Admin** icon in the Office 365 App Launcher.
- Inspect the set of Active Users in the current tenancy.
 - In the left navigation menu, expand the **Users** node and click **Active Users** to navigate to the **Active Users** page.

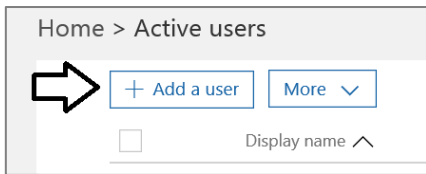


- Once the **Active Users** page is displayed, you should be able to verify that the user account you are currently logged on as is the only user account that exists in the current tenancy. Remember that this account has been set up as a Global Administrator to the tenant because it is the account that was used when creating the tenant.



3. Create a new user account.

- a) On the **Active Users** page, click the button **Add a user** button to create a new user account



- b) Fill in the **Create new user account** form with information for a new user account. When creating this account, you can use any name you would like. These lab instructions will demonstrate this by creating a user account for a person named **James Bond** with a user name and email of **JamesB@CptPowerBiTenant.onmicrosoft.com**.

- c) Expand **Password** section under **Contact Information** section.

- i) Select the option for **Let me create the password**.
- ii) Enter a password of **pass@word1** into the textboxes labeled **Password** and **Retype Password**.
- iii) Uncheck the checkbox for the option labeled **Make this user change their password when they first sign in**.

- d) Expand the roles section. You do not need to change anything in this section, although you should note that this new user account will be created as a standard user account without any administrator access or privileges.

Note that the new account has been automatically assigned trial license for **Office 365 Enterprise E5** plan. That means you do not need to do anything further to enable support for Power BI. Having the for **Office 365 Enterprise E5** license provides the same level access as a **Power BI Pro** license.

- e) Click the Save button at the bottom of the new user form to create the new user account.

| | | |
|-----------------------------------|--------------------------------|---|
| Contact information | | ▼ |
| Password | Admin-created | ▼ |
| Roles | User (no administrator access) | ▼ |
| Product licenses | Office 365 Enterprise E5 | ▼ |
| <div>Save</div> <div>Cancel</div> | | |

- f) When you see the **User was added** message, click **Send email and close** to dismiss the **Add new user** task pane.
g) Verify that the new user account has been created and is displayed along with your primary user account.

Home > Active users

+ Add a user

More ▼

Filters All users ▼

Search

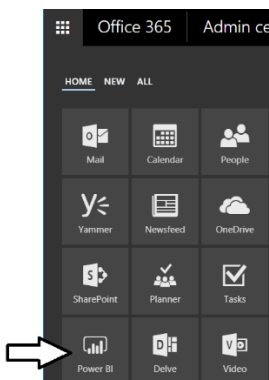
Export

| <input type="checkbox"/> | Display name ^ | User name | Status |
|--------------------------|----------------|--|--------------------------|
| <input type="checkbox"/> | James Bond | JamesB@CptPowerBITenant.onmicrosoft.com | Office 365 Enterprise E5 |
| <input type="checkbox"/> | Ted Pattison | Student@CptPowerBITenant.onmicrosoft.com | Office 365 Enterprise E5 |

Exercise 5: Use the Power BI Service to Import a New Dataset

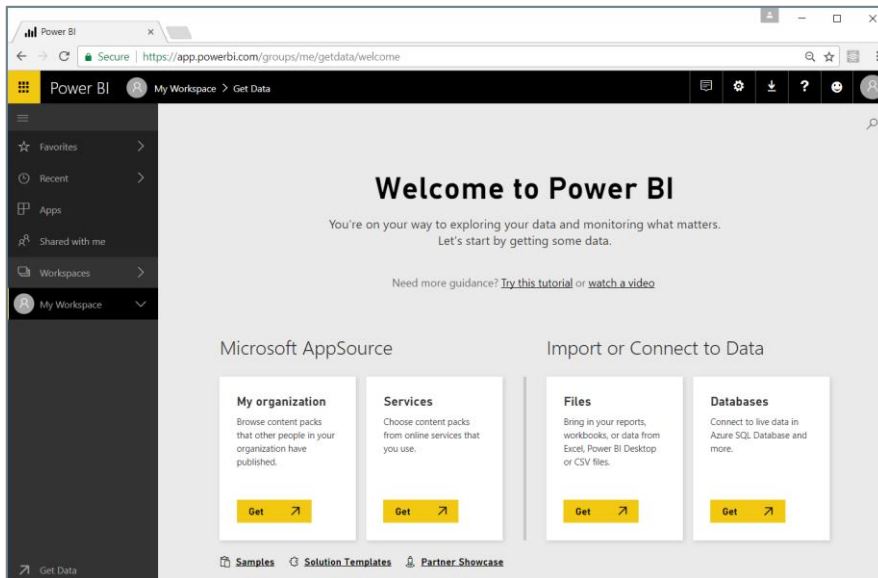
Now, after all that busy work, you are finally ready to begin working with Power BI. In this exercise you will begin by importing data from an Excel workbook to create a new Power BI dataset. In the exercise steps that follow, you will create a report and a dashboard.

1. In the browser, navigate to the Power BI service by clicking the **Power BI** icon in the Office 365 App Launcher. If you are prompted to log on, make sure you log on using the same primary Office 365 user account that you created earlier when you created the Office 365 trial account. In other words, sign on with the administrator account and not with the secondary user account you created in the previous exercise.

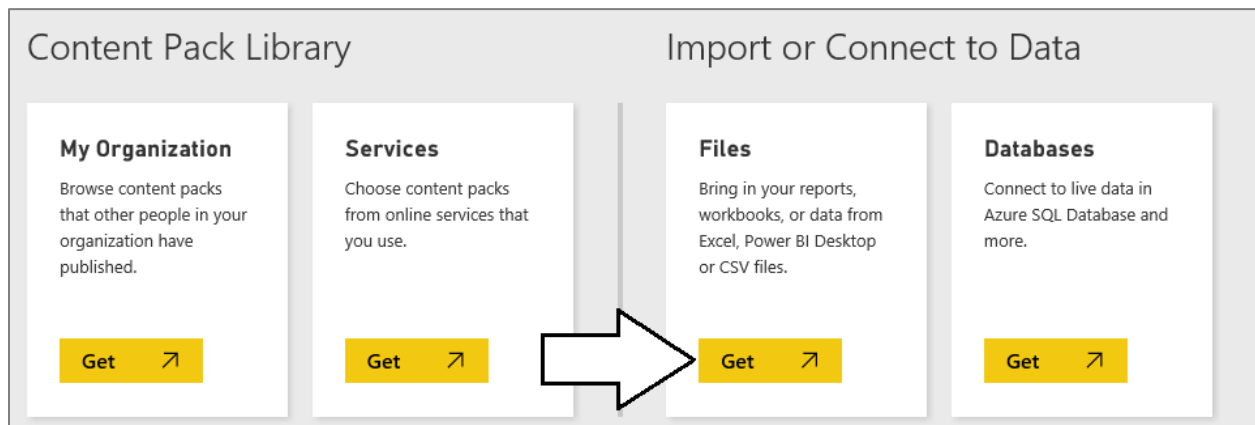


What usually happens when you click the **Power BI** tile in the Office 365 Application Launcher is that you will navigate to the page that shows the dashboards, reports and datasets in your personal workspace. However, your personal workspace is initially empty so it doesn't contain any dashboards, reports or datasets yet. Therefore, the Power BI service display a special welcome page that allows you to get started by linking to or importing data.

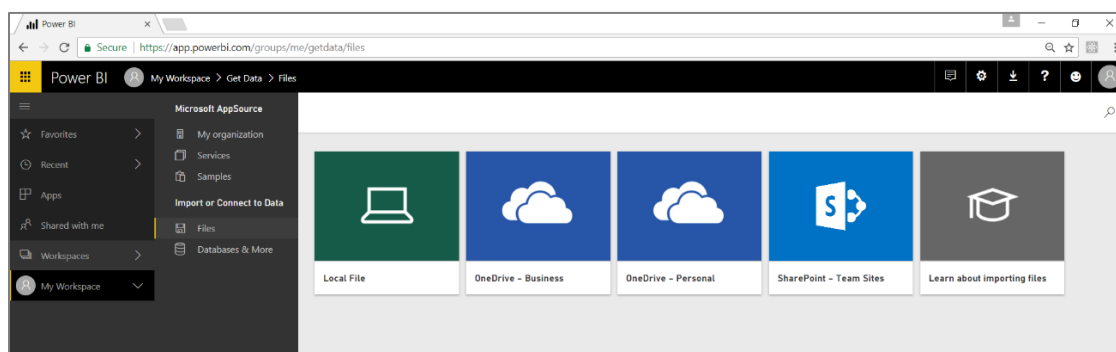
2. At this point, you should be at the **Welcome to Power BI** page as seen in the following screenshot.



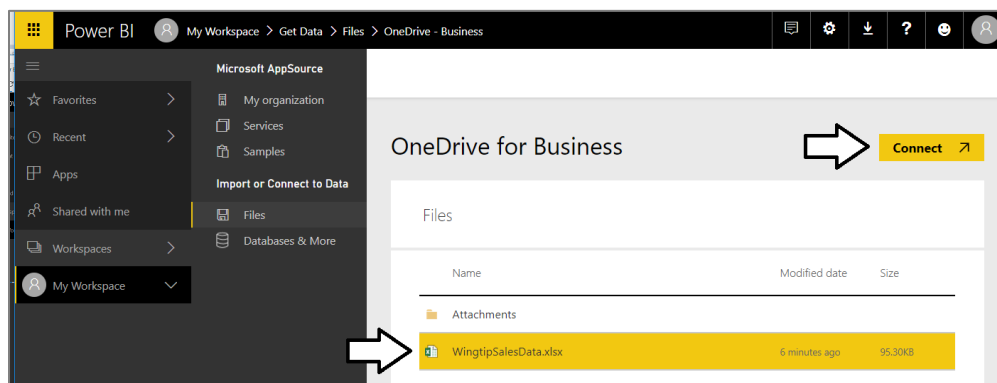
3. Import data from an Excel workbook file.
a) Click in the **Get** button in the **Files** tile under the **Import or Connect to Data** section header.



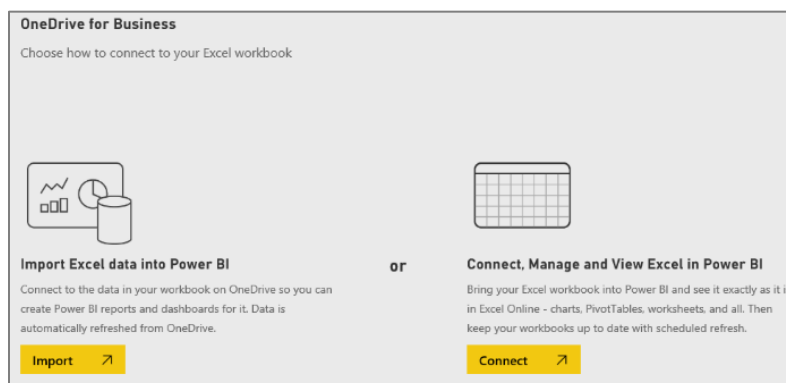
- b) On the next page you should see several tiles which indicate your choices for the location of the file you would like to connect to or import. Click on the tile with the caption **OneDrive – Business** so you can import data from the Excel workbook you uploaded to your OneDrive site in a previous exercise.



- c) On the **OneDrive for Business** page, select the workbook named **WingtipSalesData.xlsx** and then click the **Connect** button on the top right-hand side of the page.

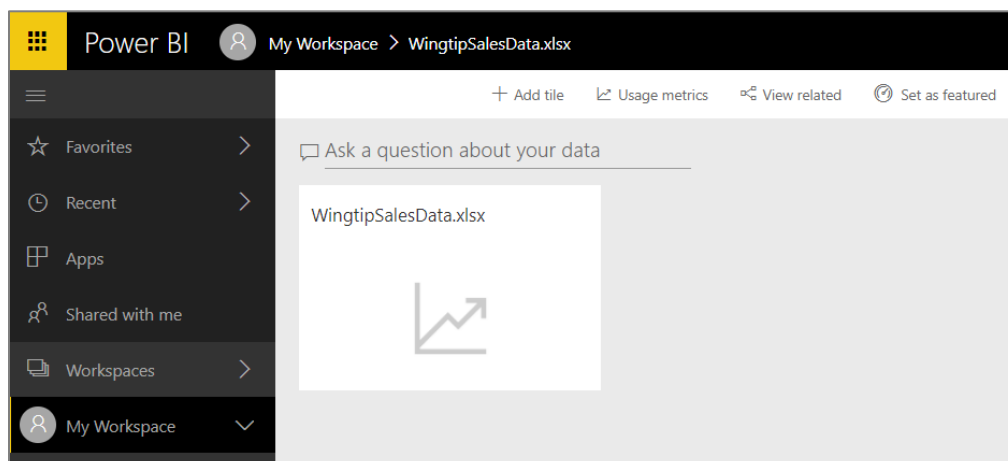


- d) After clicking the **Connect** button in the previous step, you are taken to a page which prompts you to **Choose how to connect to your Excel workbook**. Click the **Import** button on the bottom left-hand side of the page to import data from the Excel workbook into the Power BI service to create a new dataset.



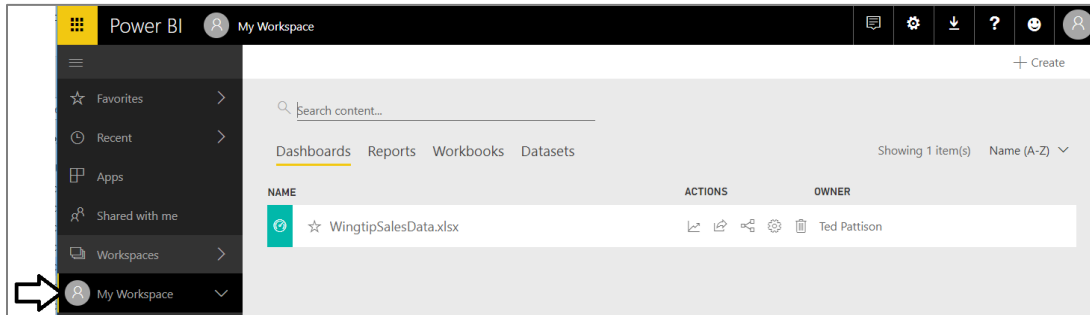
At this point you might make the observation that Microsoft has worked to streamline the user experience in Power BI when working with data files that have been uploaded to OneDrive sites. Once you upload your data files to a OneDrive site, they are very easy to access and integrate into your Power BI workspaces.

- e) After the import process has completed, the Power BI service will display a dashboard that was created during the import of the file **WingtipSalesData.xlsx**.



4. Navigate around inside your personal workspace.

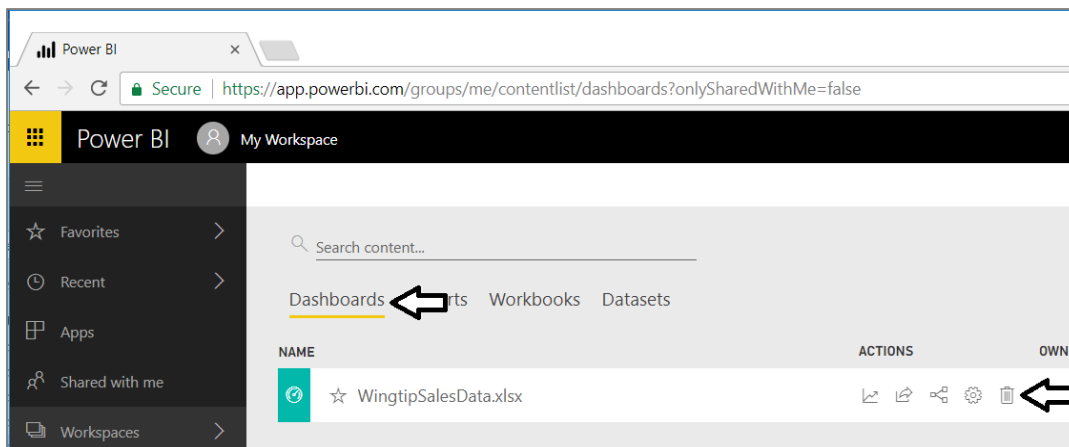
- Click the **My Workspace** tab in the left navigation.
- Click the links for **Dashboards**, **Reports**, **Workbooks** and **Datasets** to see what's currently in the workspace. You should see that the import process has created a dashboard named **WingtipSalesData.xlsx** and a dataset named **WingtipSalesData**.



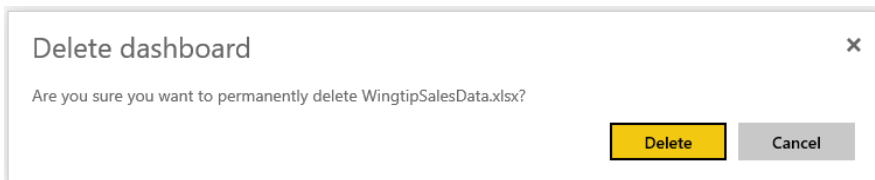
Note that when importing data from an Excel workbook that the Power BI service creates both a new dataset and a new dashboard. However, you might want just the dataset but not the dashboard. Now you will learn how to delete a dashboard if you do not need it.

5. Delete the dashboard named **WingtipSalesData.xlsx**.

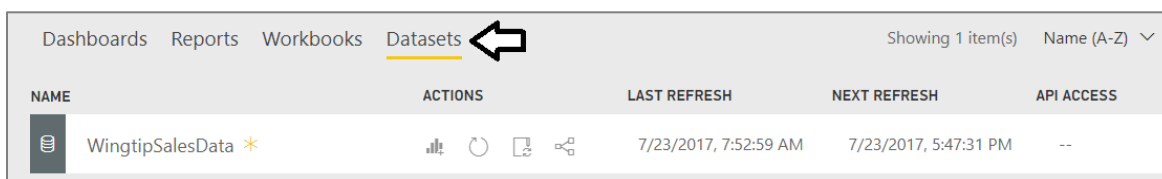
- Navigate to the **Dashboard** tab of your personal workspace and click the delete button with the trashcan icon.



- When prompted, confirm you want to delete this dashboard.



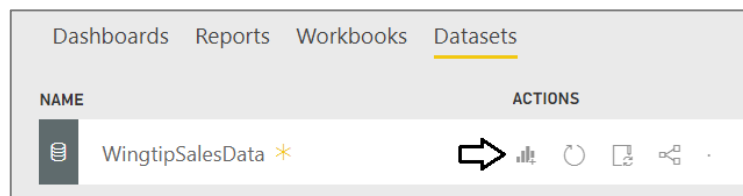
- Your personal workspace should now just contain the **WingtipSalesData** dataset but no other dashboards or reports.



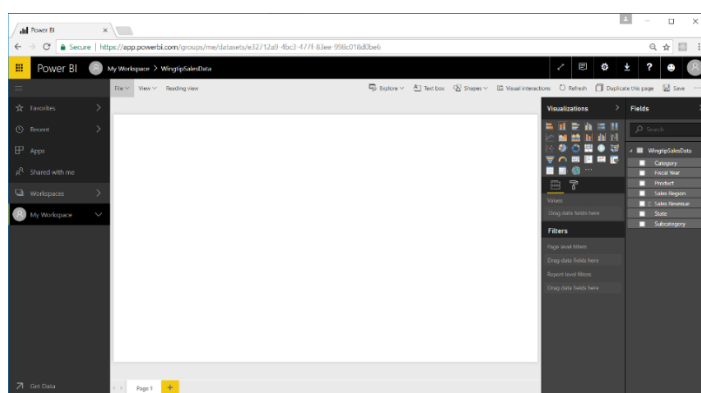
Exercise 6: Create a New Power BI Report with Multiple Pages

Now that you have created a dataset, the next setup step involves creating a new report with two pages of visualizations.

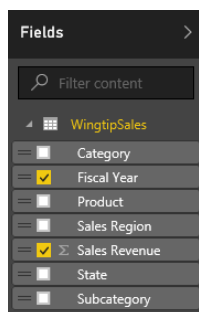
1. Create a new report by clicking the **Create Report** button of the **WingtipSalesData** dataset in the **Datasets** tab.



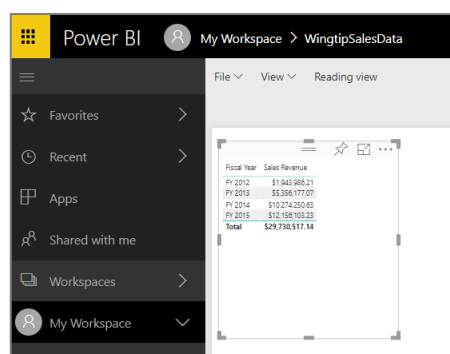
2. When you create a new report using a dataset such as **WingtipSalesData**, the Power BI service displays a page in report design mode as shown in the following screenshot. Locate the **Fields** list for the dataset on the right-hand side of the page.



3. In the **Fields** list on the right-hand side of the page, click the checkbox beside **Fiscal Year** and then select the checkbox beside **Sales Revenue**.



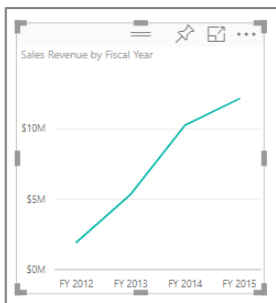
4. This should create a table visual in the new report as shown in the following screenshot.



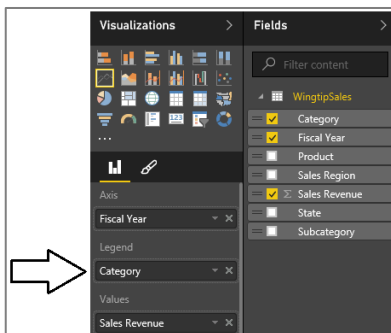
5. Change the visual type from a table to a line chart by clicking the **Line chart** button in the **Visualizations** list.



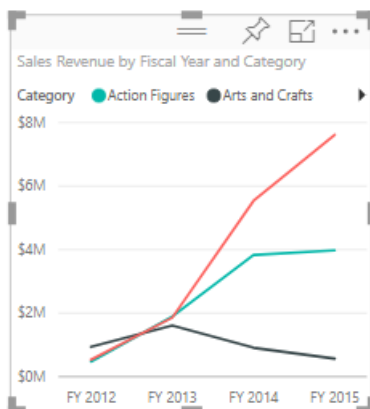
6. At this point, you should see that the visual on the report now displays a line chart.



7. Next, you will add a new dimension to your visual to show how sales revenue is distributed across product categories. First, make sure the visual with the line chart is selected and then drag-and-drop the **Category** field from the **Fields** list into the **Legend** well in the **Visualizations** pane as shown in the following screenshot.



8. At this point, your visual should match the line chart shown in the following screenshot.

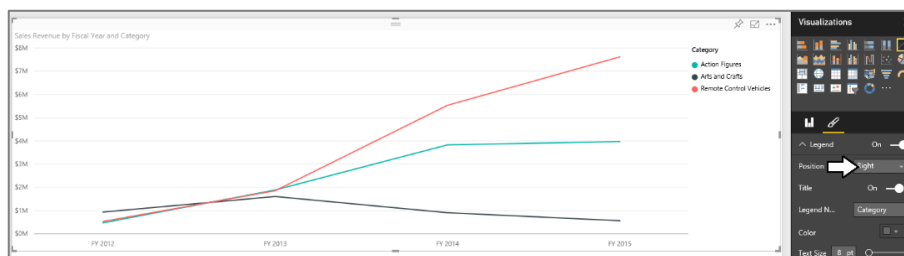


9. Select the handle at the bottom-right corner of the visualization and resize it so it takes up the width of the current report page.



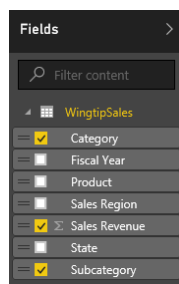
10. Reposition the Line chart's legend.

- Make sure the visual with the Line chart is selected.
- In the **Visualizations** pane, click the pen icon to activate the **Format** properties pane.
- In the **Legend** section, locate the **Position** property and update it to **Right**.
- The legend should now be displayed in the upper right corner of the line chart visual.



11. Add a second visualization to the current report page.

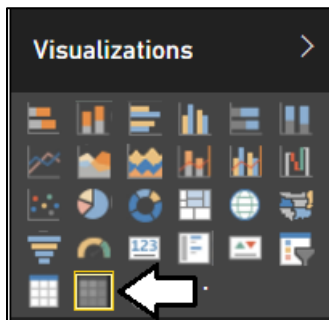
- Now you will. Begin by clicking the white space under the visualization so that the visualization is no longer selected. Next, return to the **Fields** list and select the checkbox beside the **Category** field. Next, select the checkbox beside the **Subcategory** field and then select the checkbox beside the **Sales Revenue** field.



- Now, the current report page should display a second visual like the one shown in the following screenshot. Note that you will likely need to resize this visual so it displays all its data without clipping out the content on the right-hand side.

| Category | Subcategory | Sales Revenue |
|-------------------------|-------------------|------------------------|
| Action Figures | Cute and Huggable | \$4,949,463.70 |
| Action Figures | Tough Guys | \$5,217,188.80 |
| Arts and Crafts | Drawing | \$2,312,202.14 |
| Arts and Crafts | Painting | \$1,711,137.15 |
| Remote Control Vehicles | Boats | \$175,392.85 |
| Remote Control Vehicles | Cars | \$1,917,031.30 |
| Remote Control Vehicles | Helicopter | \$4,294,070.85 |
| Remote Control Vehicles | Planes | \$6,166,672.85 |
| Remote Control Vehicles | Trucks | \$2,987,357.50 |
| Total | | \$29,730,517.14 |

- c) Change the type of visualization from table to matrix by clicking the **Matrix** button in the **Visualizations** list.



- d) Now, the second visualization should display as a matrix instead of a standard table. However, the matrix by default only displays rows of the top-level **Category** field but not the **Subcategory** field.

A screenshot of a Power BI matrix visualization. The matrix has two columns: 'Category' and 'Sales Revenue'. It lists four categories: 'Action Figures', 'Arts and Crafts', 'Remote Control Vehicles', and a 'Total' row. The sales revenue values are \$10,166,652.50, \$4,023,339.29, \$15,540,525.35, and \$29,730,517.14 respectively.

| Category | Sales Revenue |
|-------------------------|-----------------|
| Action Figures | \$10,166,652.50 |
| Arts and Crafts | \$4,023,339.29 |
| Remote Control Vehicles | \$15,540,525.35 |
| Total | \$29,730,517.14 |

- e) Click the **Expand All** button to expand the matrix to show subcategories in addition to categories.

A screenshot of the same Power BI matrix visualization. The 'Expand All' button, represented by a double arrow icon, is highlighted with a white arrow. The matrix content remains the same as in the previous screenshot.

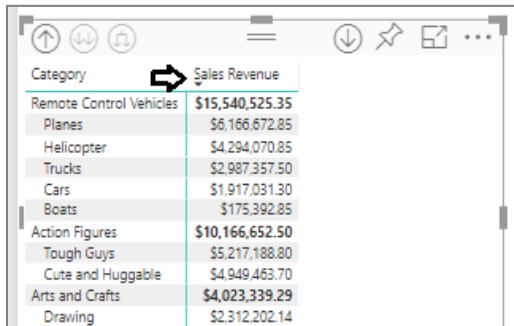
| Category | Sales Revenue |
|-------------------------|-----------------|
| Action Figures | \$10,166,652.50 |
| Arts and Crafts | \$4,023,339.29 |
| Remote Control Vehicles | \$15,540,525.35 |
| Total | \$29,730,517.14 |

- f) The visual should now display subcategories as well as categories.

A screenshot of the expanded Power BI matrix visualization. The matrix now shows subcategories under each main category. The 'Category' column lists the main categories, and the 'Sales Revenue' column shows the revenue for each subcategory. The total revenue remains the same.

| Category | Sales Revenue |
|-------------------------|-----------------|
| Action Figures | \$10,166,652.50 |
| Cute and Huggable | \$4,949,463.70 |
| Tough Guys | \$5,217,188.80 |
| Arts and Crafts | \$4,023,339.29 |
| Drawing | \$2,312,202.14 |
| Painting | \$1,711,137.15 |
| Remote Control Vehicles | \$15,540,525.35 |
| Boats | \$175,392.85 |
| Cars | \$1,917,031.30 |
| Helicopter | \$4,294,070.85 |
| Planes | \$6,166,672.85 |
| Trucks | \$2,987,357.50 |
| Total | \$29,730,517.14 |

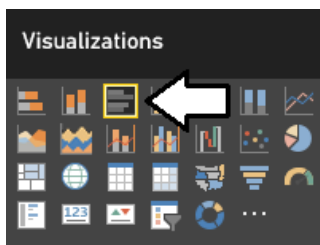
- g) Inside the matrix, click on the **Sales Revenue** column header to resort the data in the matrix so that the product categories and subcategories with the highest amounts of sales revenue are sorted to the top of the matrix.



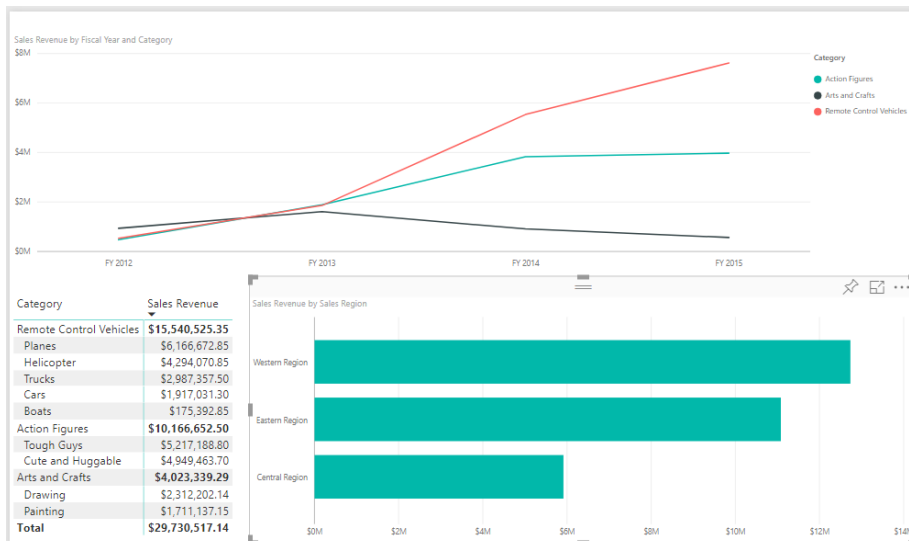
| Category | Sales Revenue |
|-------------------------|-----------------|
| Remote Control Vehicles | \$15,540,525.35 |
| Planes | \$6,166,672.85 |
| Helicopter | \$4,294,070.85 |
| Trucks | \$2,987,357.50 |
| Cars | \$1,917,031.30 |
| Boats | \$175,392.85 |
| Action Figures | \$10,166,652.50 |
| Tough Guys | \$5,217,188.80 |
| Cute and Huggable | \$4,949,463.70 |
| Arts and Crafts | \$4,023,339.29 |
| Drawing | \$2,312,202.14 |

12. Add a third visual to the current report page.

- Click the white space on the report page outside of the two existing visuals so that neither visual is selected.
- Return to the **Fields** list and select the checkbox beside the **Sales Region** field.
- Select the checkbox beside the **Sales Revenue** field.
- After creating the new visual, change the visualization type to a **Clustered bar chart** using the **Visualizations** list.

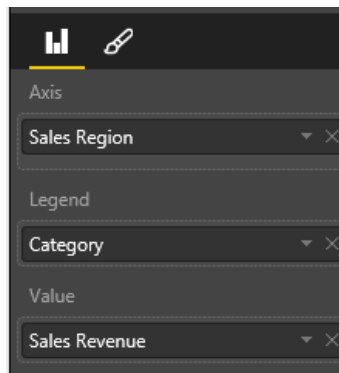


- Using the mouse, reposition the new visual so it takes up the bottom right corner of the page.



13. Add a legend to the Clustered bar chart to visualize how revenue breaks down across product categories.

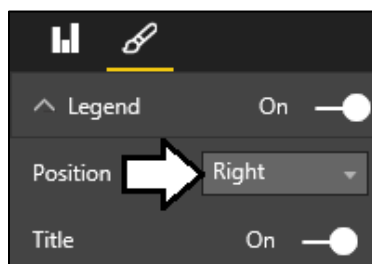
- Make sure the Clustered bar chart visual is selected.
- Click on the chart icon in the **Visualizations** task pane so you can edit the **Field** properties of the new **Clustered bar chart**.
- Drag the **Category** field from the **Fields** list into the **Legend** well in the **Field** properties pane.



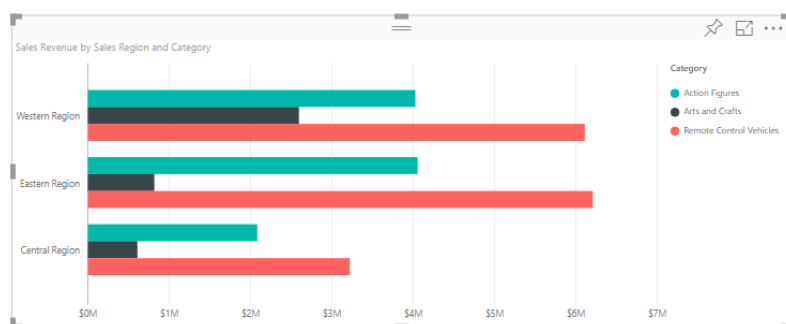
d) You should not see revenue for each sales region is further broken out by product category.



e) Modify the position of the legend for the Clustered bar chart to the right.

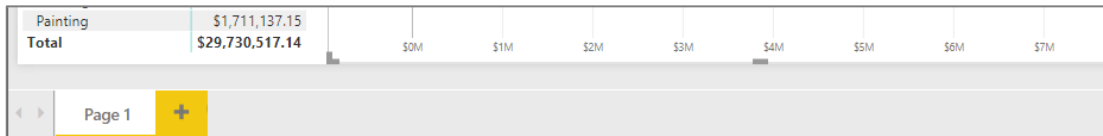


f) Your Clustered bar chart should now look like the one in the following screenshot.

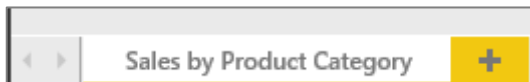


If you have time, you might explore the other options available for editing the appearance of a visualization by examining the other options that are available on the **Visualizations** task pane when a visual is selected. Note that the set of available options change depending on what type of visual is selected.

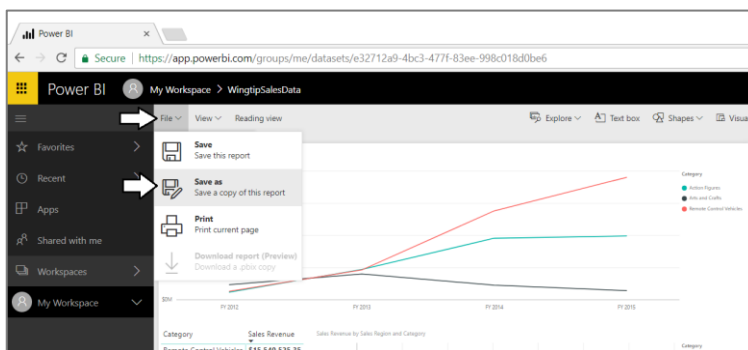
14. Now it is time to save the report. Begin by changing the name of the current page. Locate the report page name section at the bottom left of the current page and observe that the page has been given an initial name of **Page 1**.



15. Double click on the page name of **Page 1** to enter edit mode and then update the page name to **Sales by Product Category**.



16. Save the report by dropping down the reports **File** menu and selecting the **Save As** menu command.



17. When prompted, enter a report name of **Product Sales** and click the **Save** button.

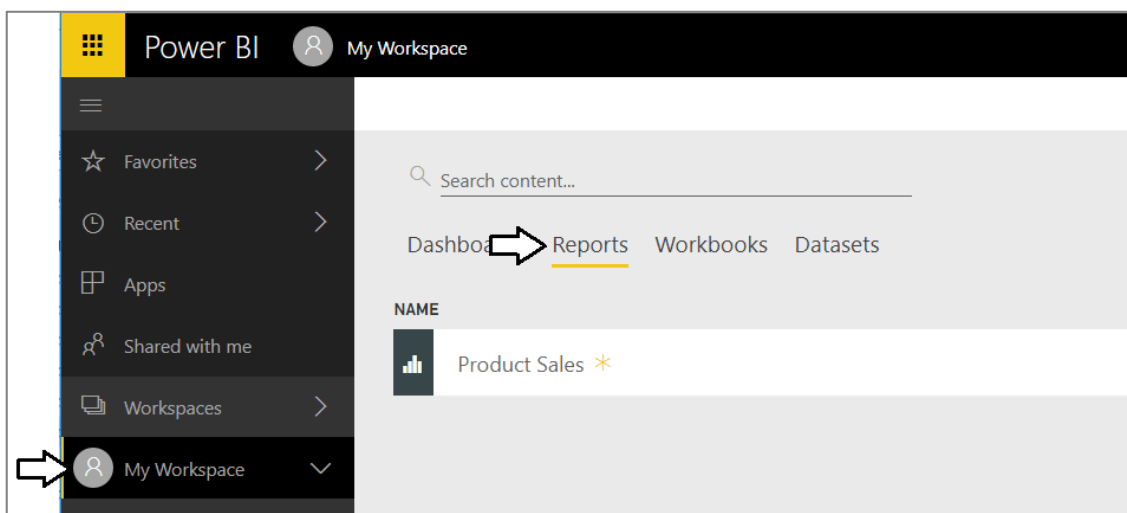
Save Your Report

Enter a name for your report:

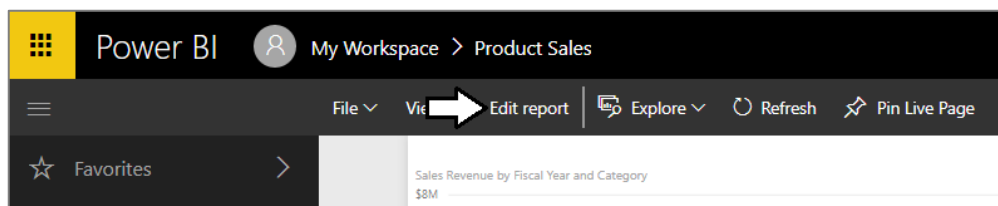
Product Sales

Save Cancel

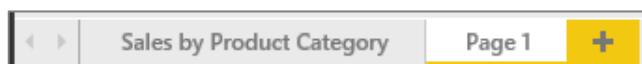
18. After saving the **Product Sales** report, you should be able to see a link for it in the **Reports** section of the left-hand navigation.



19. Click the **Edit report** button to move the report back into edit mode.



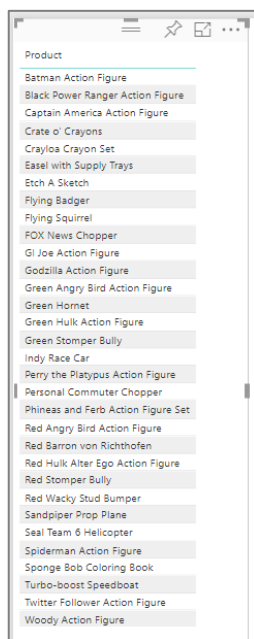
20. Now, add a second page to the **Product Sales** report. Accomplish this by clicking the button with the plus (+) sign to the right of the page name. The Power BI service will respond by creating a second page named **Page 1**.



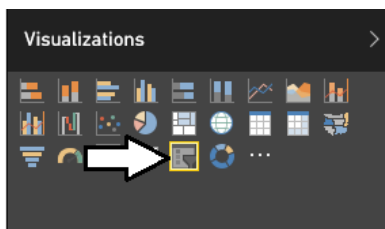
21. Change the name of the second page from **Page 1** to **Sales by Product**.



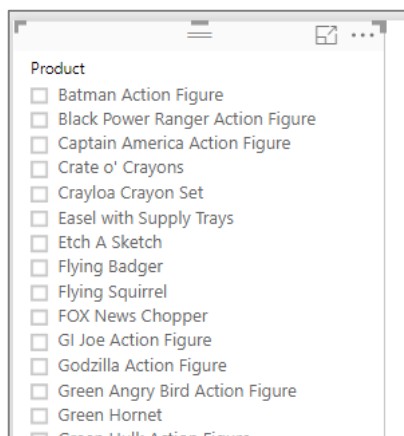
22. On the new **Sales by Product** page, add a new visual by selecting the checkbox beside the **Product** field from the **Fields** list. This should create a simple table visual with a list of products. Resize the height of the visual to display all products at once without the need for a scrollbar.



23. Change the type of visualization from a table to a slicer by clicking the **Slicer** button in the **Visualizations** list.



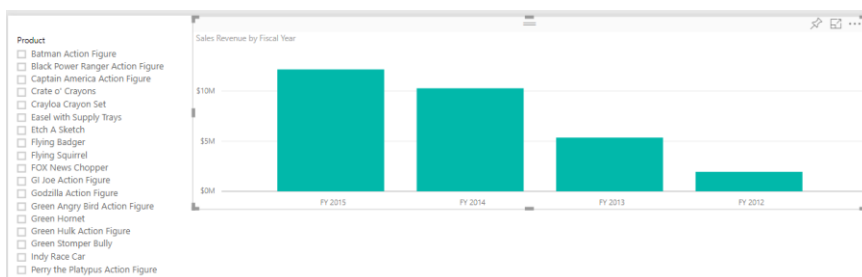
24. Now that the visualization has been changed to a slicer, you should see that each product has an associated checkbox.



Keep in mind that this slicer visual adds the ability for the current user to interact with this report by selecting one or more products using these checkboxes. When a user changes the selection of products, the Power BI service will automatically refresh the other visualizations on the page by filtering the results using the selected product or products. Learning how to make reports interactive is a key to creating effective BI solutions with Power BI.

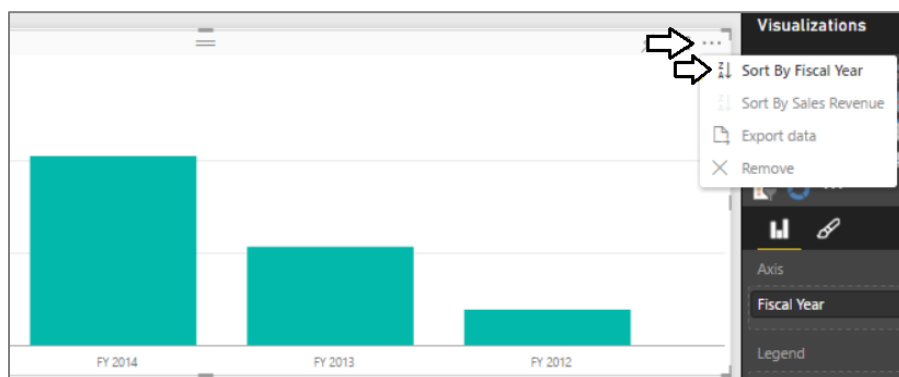
25. Add a second visualization to **Sales by Product** page.

- Click whitespace in the report to ensure the first visualization is not selected.
- Create a new visualization by selecting the checkbox for the **Sales Revenue** field and then selecting the checkbox for the **Fiscal Year** field.
- Use the mouse to reposition the new visual so it takes up the top right corner of the page.
- The new visual as a bar chart should now match the following screenshot.

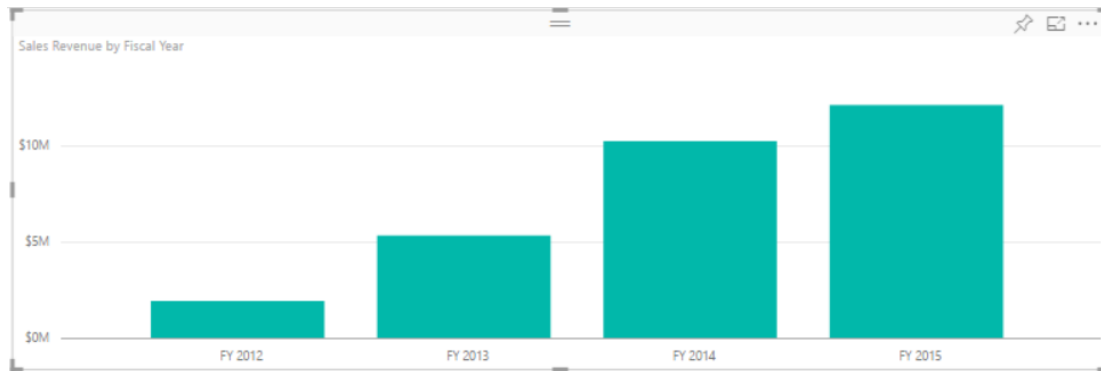


Note that the bar chart has been created with the fiscal years decreasing as it moves from left to right. In the next step you will reverse the order of the columns in this bar chart so that columns for earlier years are sorted to the right and that later years are sorted left.

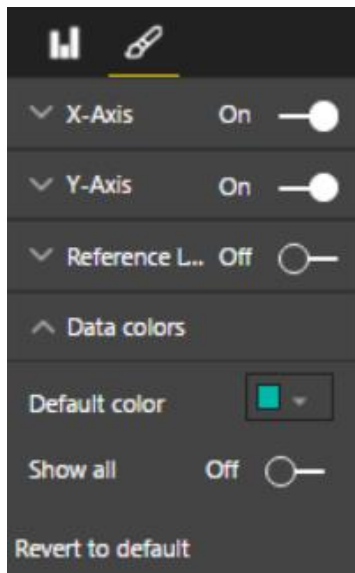
- Click the flyout menu at the top-right corner of the bar chart visual and select **Sort By Fiscal Year** menu command.



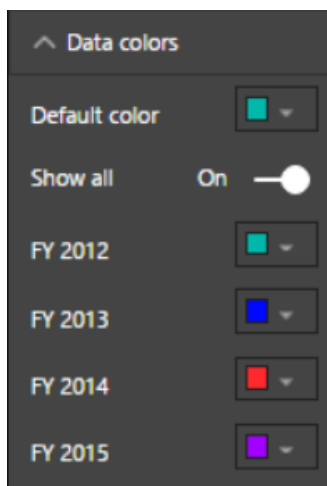
- f) The bar chart should now display its bars with fiscal year increasing as you move to the right.



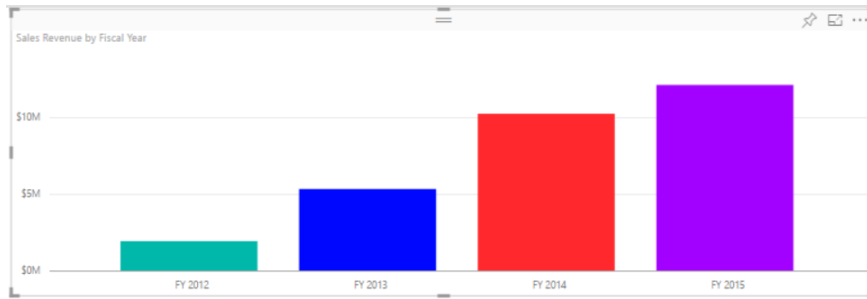
- g) With the bar chart selected, look inside the **Format** properties pane and locate the **Data colors** section. Inside the **Data colors** section, you should see that the **Show all** property is set to **Off**.



- h) Change the **Show all** property to **On**.
i) Assign a different color to each of the 4 fiscal years.



- j) Your bar chart should now display bars that have a different color for each year.

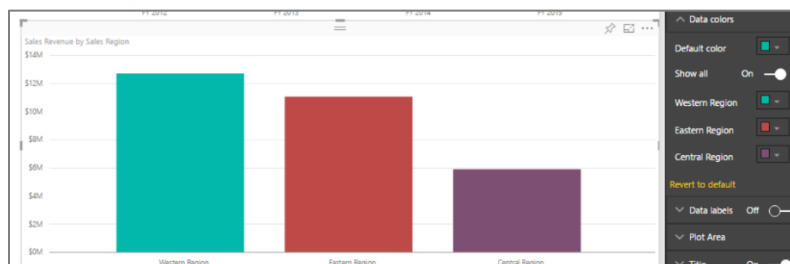


26. Add a third visual to the page.

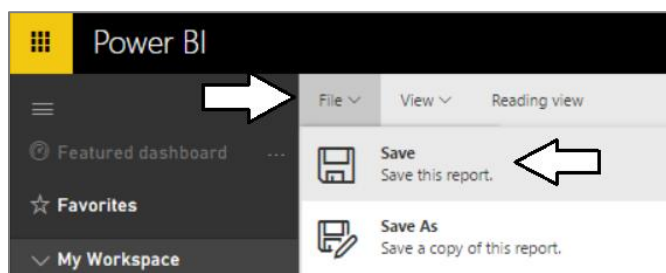
- Click whitespace in the report to ensure the neither of the two visualizations are currently selected.
- Create a third visualization by selecting the checkbox for the **Sales Revenue** field and then selecting the checkbox for the **Sales Region** field.
- Use the mouse to reposition the new visual so it takes up the bottom right corner of the page.
- The new visual should now match the following screenshot.



- e) Modify the **Data colors** section in the **Format** properties pane to give each column its own unique color.

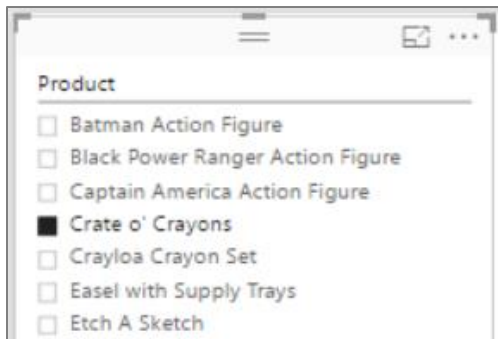


- f) Save your work by executing the **Save** command from the **File** menu.



27. Test out the interactive effect of selecting products in the slicer.

- a) Select one product at a time.



- b) Observing how the two other visualizations on the page automatically refresh to show sales data for one product at a time.



- c) Play the role of a business analyst and determine which products have the most positive increases in sales revenue from year to year. Also, find the products with downward trending sales. If you examine the sales data for the **Crate o' Crayons**, you can see sales revenue for this is trending in the wrong direction over the last four years. What other products are shown decreasing sales in this set of 32 products?

Now that you have created a report with multiple pages, it is time to move on to the next exercise where you will create a new dashboard and then you will test sharing this dashboard with another user in your Office 365 trial tenant.

Exercise 7: Create and Share a Power BI Dashboard

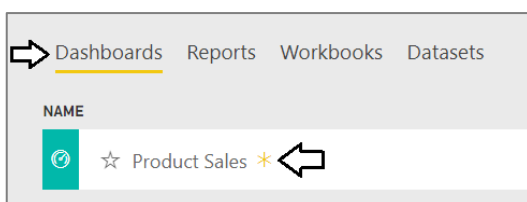
While you have already created a dataset and a report, you must create a dashboard to effectively share a customized BI solution with other users. This final setup task will walk you through the steps of creating and sharing a Power BI dashboard.

1. Navigate to the **Sales by Product Category** page of the **Product Sales** report.
2. Inspect the Clustered bar chart with product categories. Locate and click the button with the thumbtack icon which is used to pin a report visualization to a dashboard.



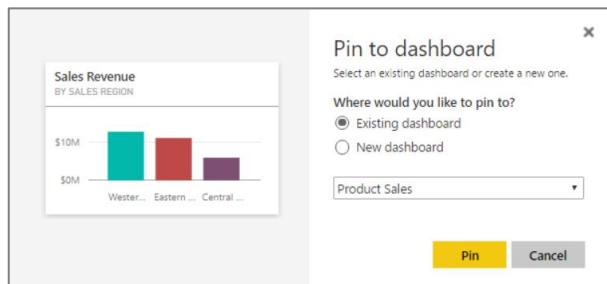
- When you click the button with the thumbtack icon, you will be prompted with the dialog which asks you where to pin the visualization. Select the option to pin the visualization to a **New Dashboard** and give the new dashboard a name of **Product Sales**. When the **Pin to Dashboard** form is filled out like the one shown in the following screenshot, click the **Pin** button.

- At this point, the new **Product Sales** dashboard should be created and a link to it should appear in the left navigation menu.

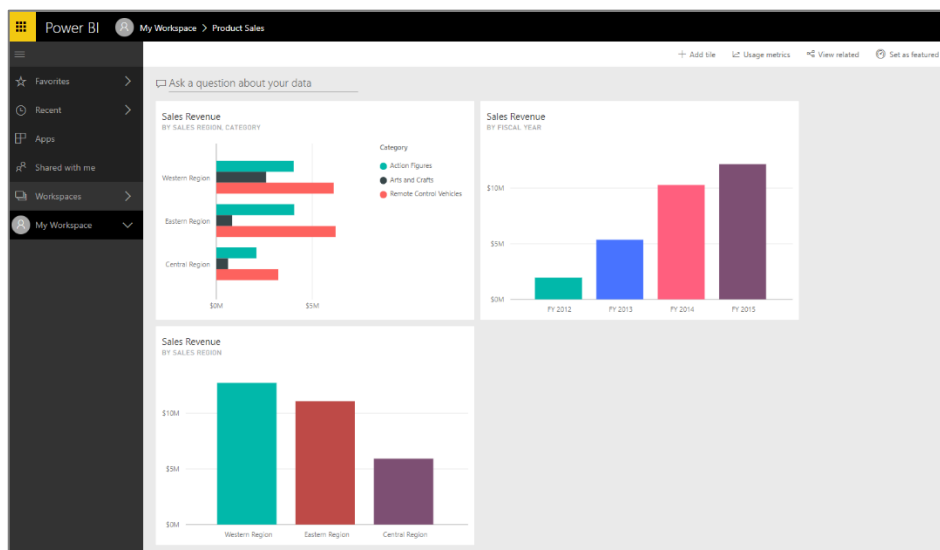


- Navigate to the **Sales by Product** page of **Product Sales** report.
- Make sure that no product is selected in the slicer visual on the left so you are looking at the results for all products combined.
- Follow the same steps to pin the bar chart visualization showing sales revenue by fiscal year to the **Product Sales** dashboard.

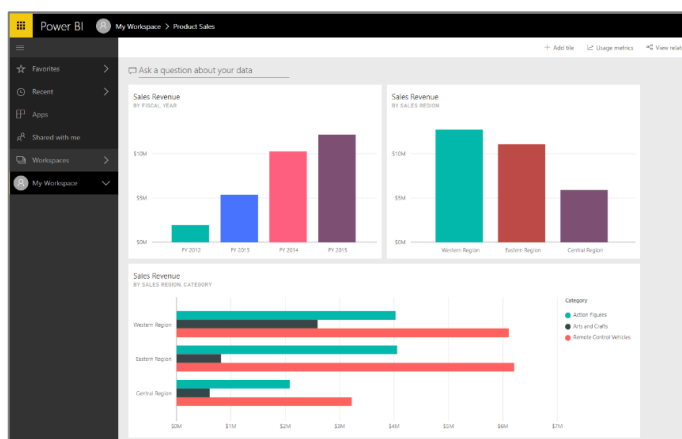
8. Remain on the **Sales by Product** page of **Product Sales** report and follow the same steps to pin the bar chart visualization showing sales revenue by sales region to the **Product Sales** dashboard.



9. Click on the **Product Sales** link in the **Dashboards** section of the left navigation menu to display the **Product Sales** dashboard. You should be able to verify that you see three tiles that have been created from the three report visualization that you pinned to this dashboard.



10. Note that you can move or resize the tiles inside the dashboard. This is due to the fact that you are the dashboard author and you are in dashboard edit mode. Use your mouse to rearrange the tiles in the dashboard to match the screenshot below.

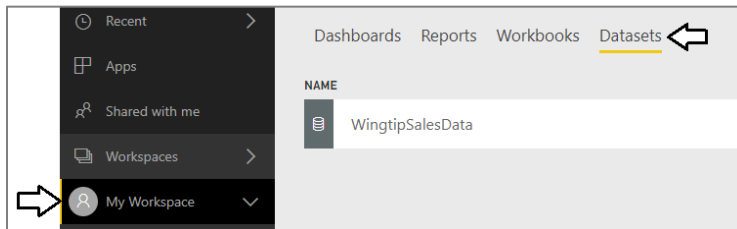


11. Experiment by clicking on the tiles in the dashboard. You will find that clicking a tile will navigate the user to the report and page that contains the visualization which was pinned to the dashboard.

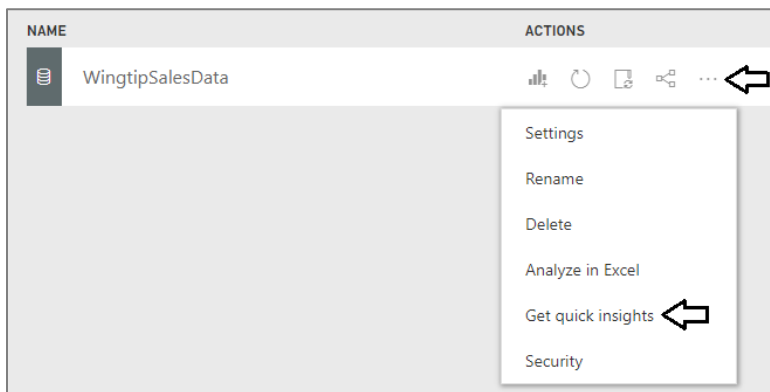
Exercise 8: Get Quick Insights on a Power BI Dataset

In this exercise, you will run a Power BI command to generate quick insights for the WingtipSalesData dataset.

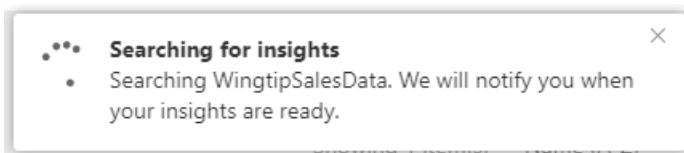
1. Get quick insights for the **WingtipSalesData** dataset.
 - a) Navigate to the Datasets tab of your personal workspace.



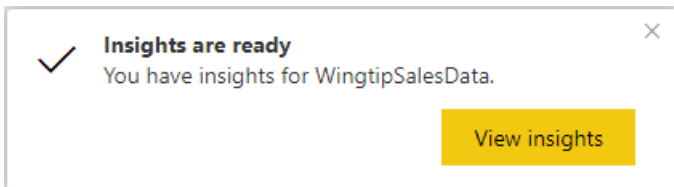
- b) Select the **Get quick insights** command from the ellipse dropdown menu of the **WingtipSaleData** dataset.



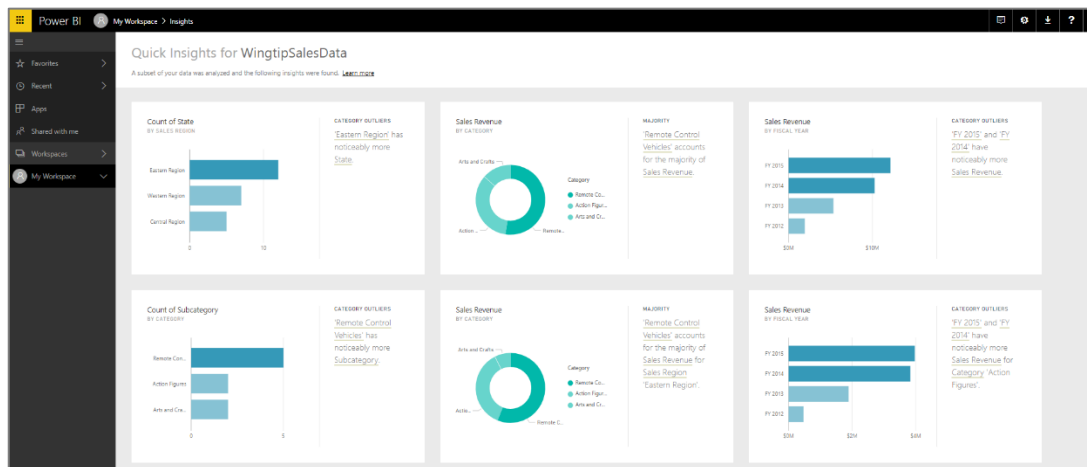
- c) Wait while the process runs.



- d) After a few seconds the process will complete. Click the **View insight** button.



- e) Take a few minutes to review all the quick insights that have been generated.



Congratulations. You have made it to the end of this setup guide and you have now created and configured a test environment in which you can begin to create and implement custom BI solutions using the Power BI platform.