

Introducing the Power BI Platform



Student Background

- What is your name?
- What are you doing with Power BI?
- Which products have you used
 - Access
 - Excel
 - SQL Server, SSRS, SSAS
 - Tableau
 - Others



Agenda

- Understanding the Power BI Platform
- Creating a Trial Office 365 Tenant for Testing
- Creating Datasets, Reports and Dashboards
- Understanding Power BI Licensing
- Staying in Sync with Monthly Updates



What is Business Intelligence?

- BI focuses on business health and performance
 - Gather insights into health of business processes
 - Take corrective actions in a timely fashion
- BI projects typically involve the following...
 - Integrate data from multiple sources
 - Perform data transformation and complex calculations
 - Analyze large data sets with rapid query response
 - Create insightful reports and visualizations
 - Provide insights that are “actionable”



How is the BI Software Industry Changing?

- Software industry is experiencing new proliferation of data
 - Number of telemetry devices is increasing exponentially
 - Device-generated data is providing new business opportunities
 - Example: Uber has used geolocation data to disrupt taxi industry
- Traditional BI and analytics models are being disrupted
 - New analytics capabilities available with new types of data sources
 - Data discovery and unstructured data analytics are new frontiers
 - Demand for self-service BI tools are on the rise
 - Balance of power shifting from IT to business divisions



What is Power BI?

- What is Power BI?
 - Cloud-based subscription service
 - Environment which promotes self-service BI *to the end user*
 - BI Platform to assists with data import, analysis and visualization
- Power BI benefits from being a cloud-based service
 - It takes only 5 seconds to subscribe to the Power BI service
 - New users can create something significant in 5 minutes or less
- Power BI adoption numbers *(as of Q1 2016)*
 - 5 million subscribers
 - 200,000 organizations
 - 40 different languages



Power BI Benefits from Microsoft Azure

- Power BI is built on top of Microsoft Azure
 - Power BI solutions can be scaled as required
 - Power BI solutions have global reach



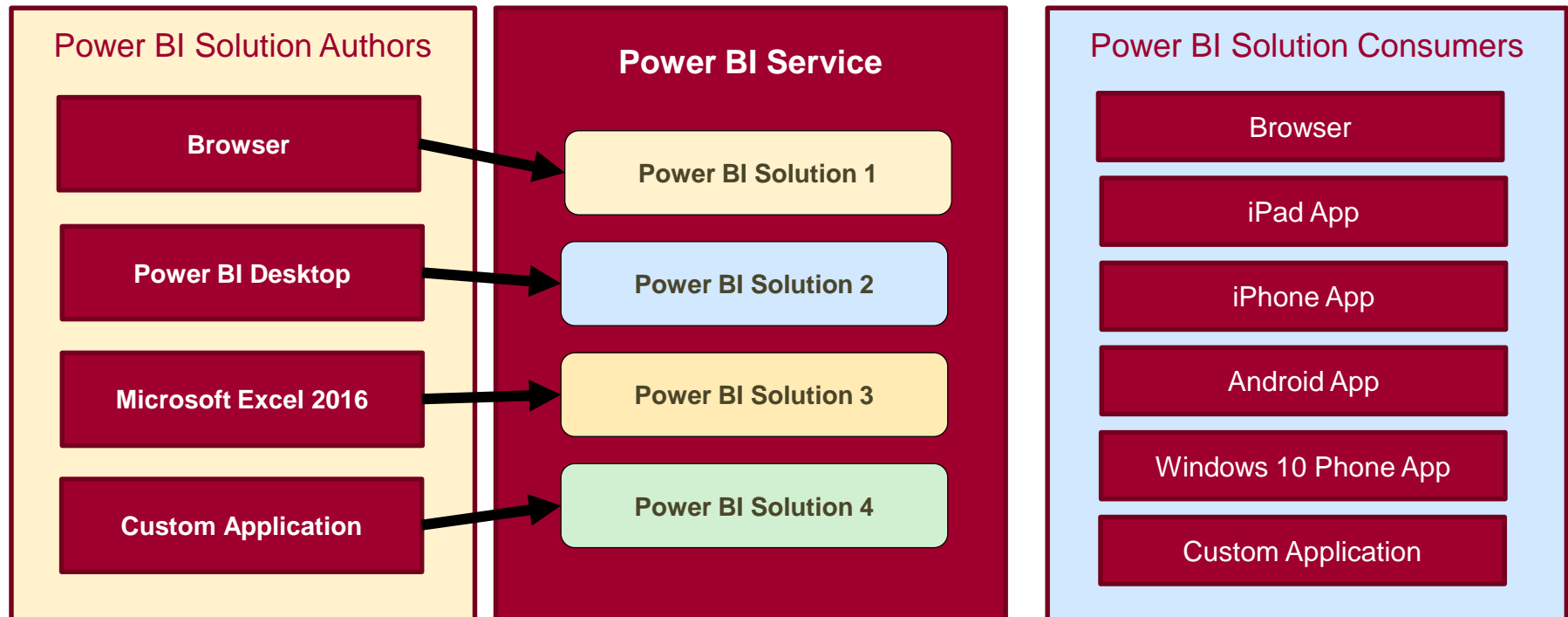
The Power BI Service

- The Power BI Service
 - Provides cloud-based foundation for Power BI platform
 - Accessible through browser at <https://app.powerbi.com>

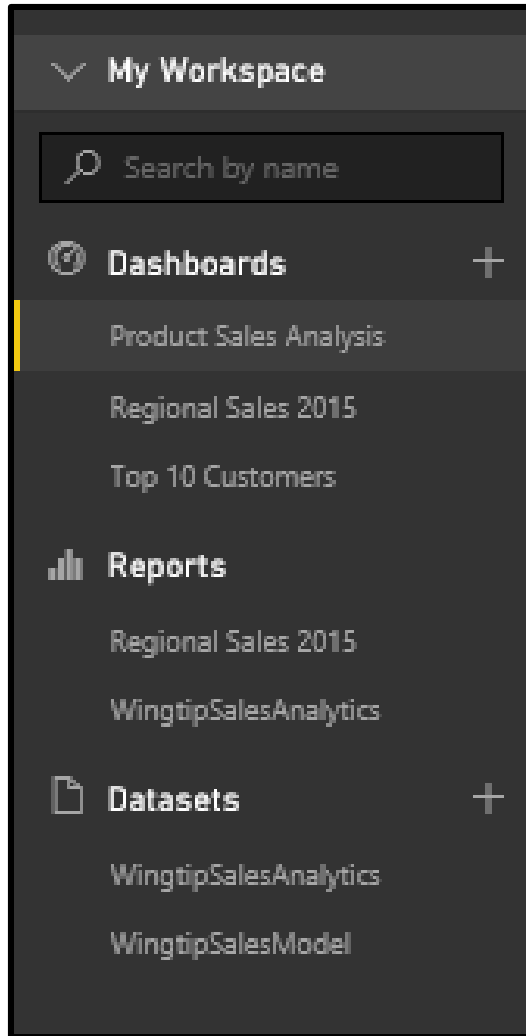


Power BI Service Architecture

- Power BI support for authors and consumers
 - BI solution authors have a choice in authoring tools
 - BI solutions consumers can use wide range of devices



Central Power BI Concepts



- **Workspace**
 - Provides user context and asset container
 - Every user has personal workspace
 - Team development requires group workspaces
- **Dashboard**
 - Consolidated view into reports and datasets
 - Custom solution entry point for mobile users
- **Report**
 - Collection of pages with tables & visualizations
 - Provides interactive control of filtering
- **Dataset**
 - Data model containing one or more tables
 - Can be very simple or very complex



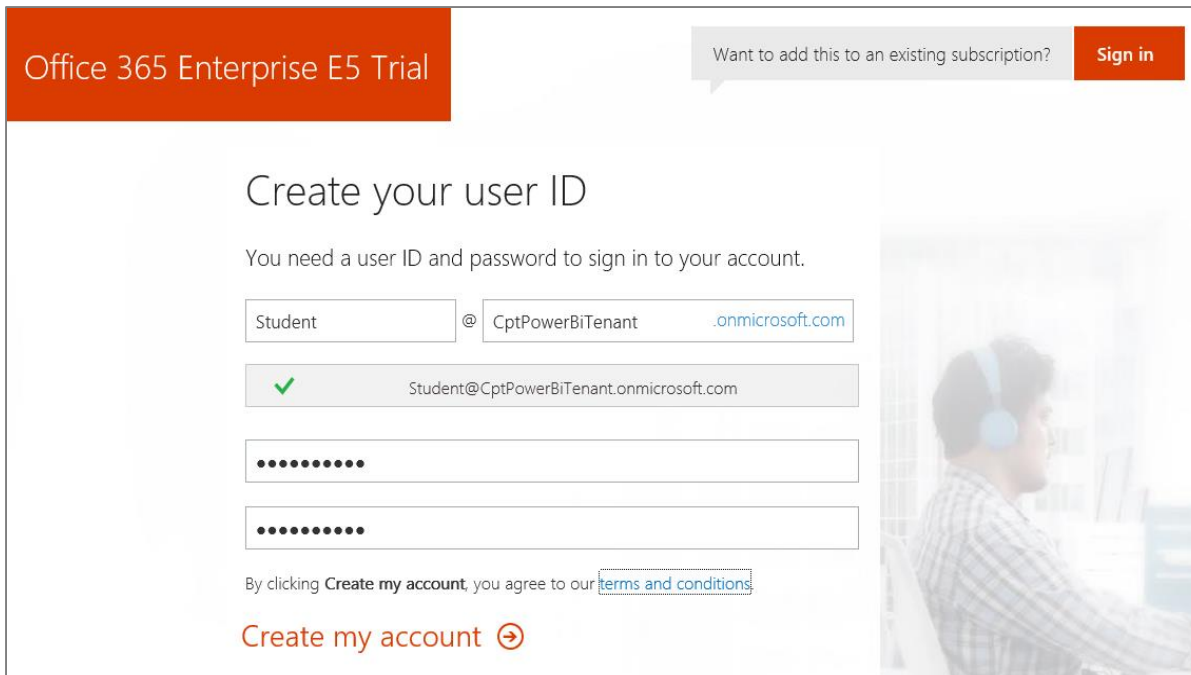
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Creating a Power BI Testing Environment

- Sign up for an Office 365 Enterprise E5 trial account
 - Creates a new Office 365 tenant
 - Creates an account which is tenant administrator
 - You can create 25 user accounts for testing purposes
 - You can create and test Office 365 unified groups



The screenshot shows the 'Office 365 Enterprise E5 Trial' sign-up page. At the top left, there is an orange banner with the text 'Office 365 Enterprise E5 Trial'. At the top right, there is a grey box with the text 'Want to add this to an existing subscription?' and an orange 'Sign in' button. The main heading is 'Create your user ID'. Below it, a message states: 'You need a user ID and password to sign in to your account.' The form consists of three input fields: a text field containing 'Student', an '@' symbol, a text field containing 'CptPowerBiTenant', and a dropdown menu showing '.onmicrosoft.com'. Below these fields, a green checkmark icon is displayed next to the email address 'Student@CptPowerBiTenant.onmicrosoft.com'. There are two password fields, each containing a series of dots. At the bottom, there is a link to 'terms and conditions' and a 'Create my account' button with a right-pointing arrow icon. On the right side of the page, there is a blurred image of a person wearing a headset and working at a computer.



Office 365 admin center

- Chores to accomplish in Office 365 admin center
 - Learn how to add secondary user accounts for testing
 - Learn how to view and manage groups

Office 365 | Admin center preview

Home > Active users

Power BI Bootcamp Labs

[+ Add a user](#) [More](#) Filters [All users](#) Search [Export](#)

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

[+ User](#) [Types of users](#) [Filters](#)

Users are people in your organization who can access Office 365.

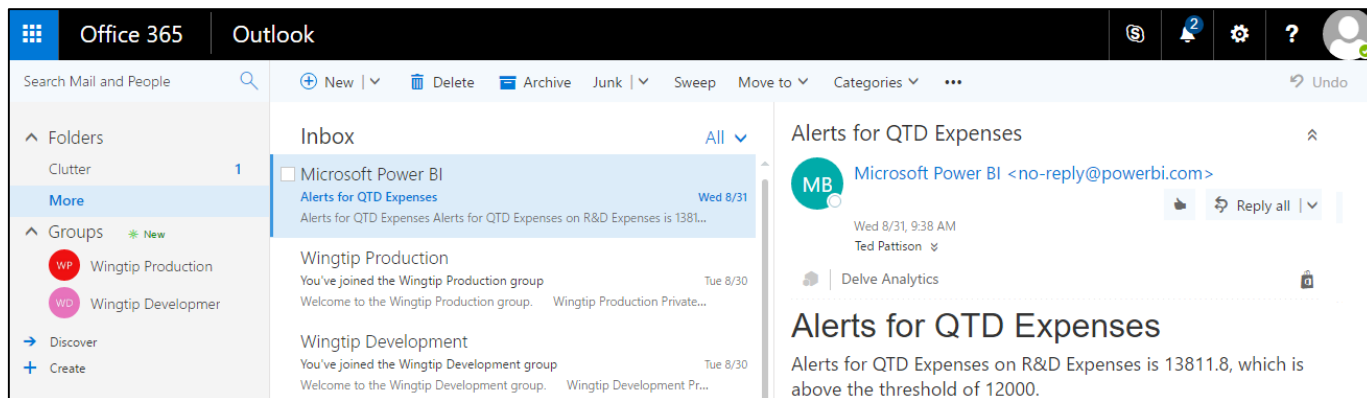
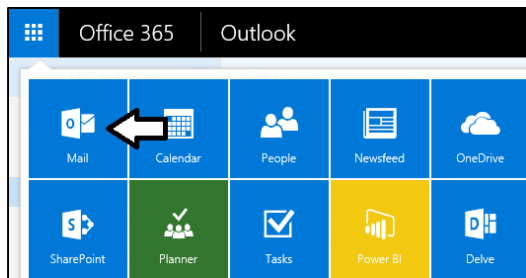
Different types of users and accounts can use Office 365 in distinct ways.

Learn how filtering will help you keep this list under control – before it gets too long.



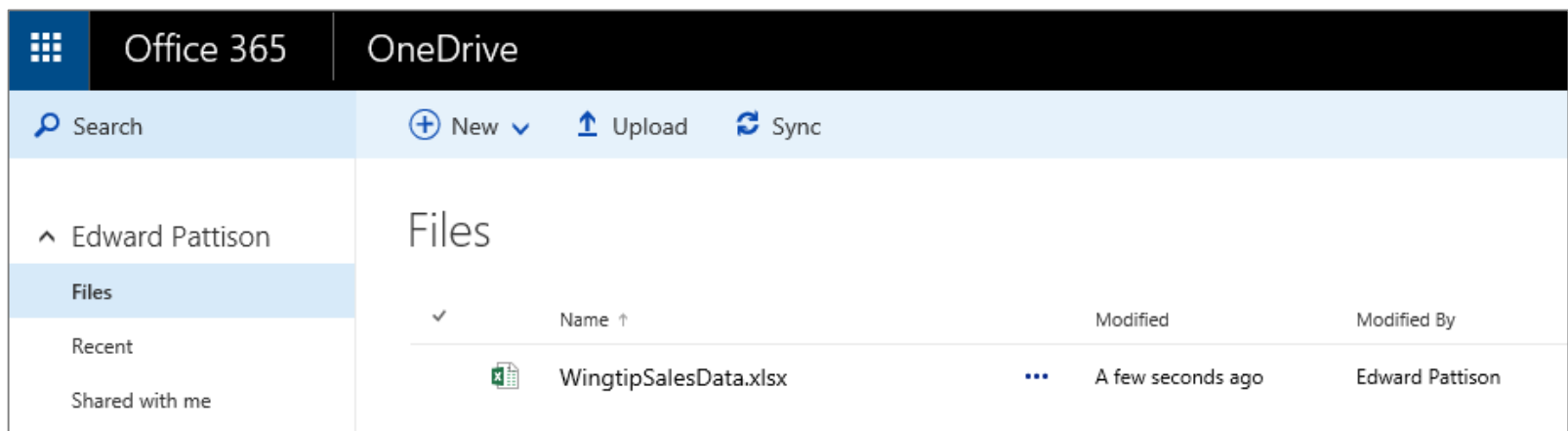
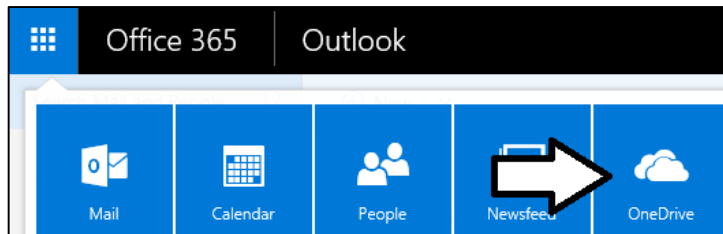
Accessing Your Office 365 Mailbox

- Make sure you can access your Exchange Inbox
 - Accessible in browser using Outlook Web App (OWA)
 - View messages sent by Power BI service
 - View and interact with Office 365 groups



Uploading Data Files to OneDrive for Business

- Preferred location for data files consumed by Power BI service
 - Excel workbooks
 - CSV files
 - PBIX files created using Power BI Desktop





DEMO

Managing Users and Subscriptions in the Office 365 admin center

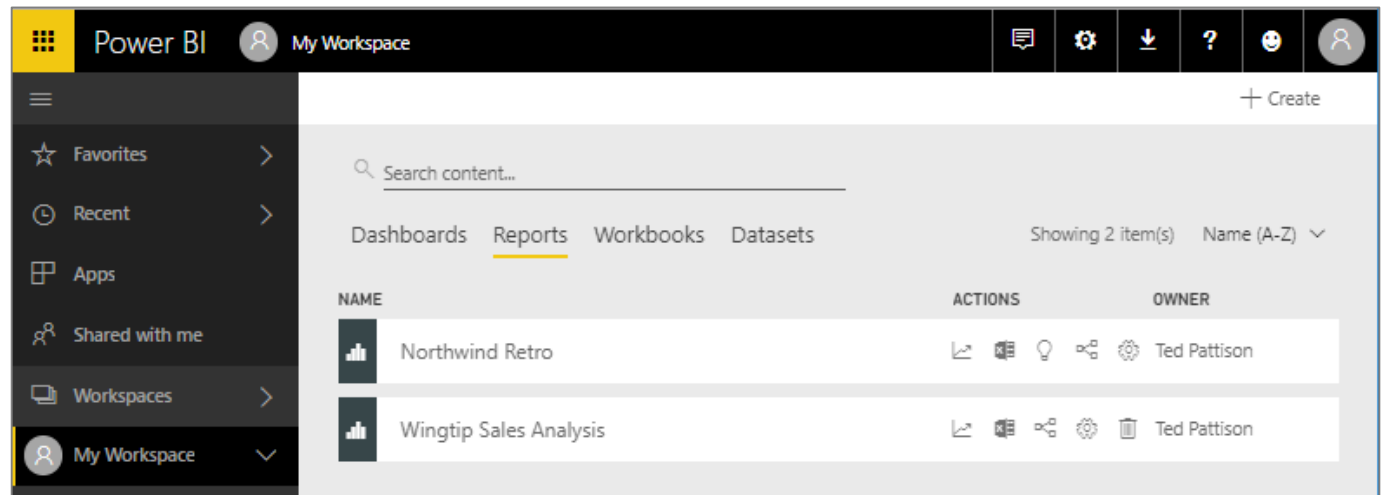
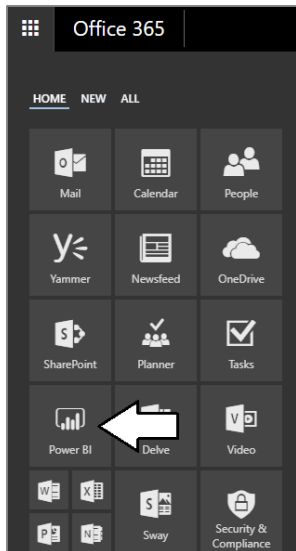
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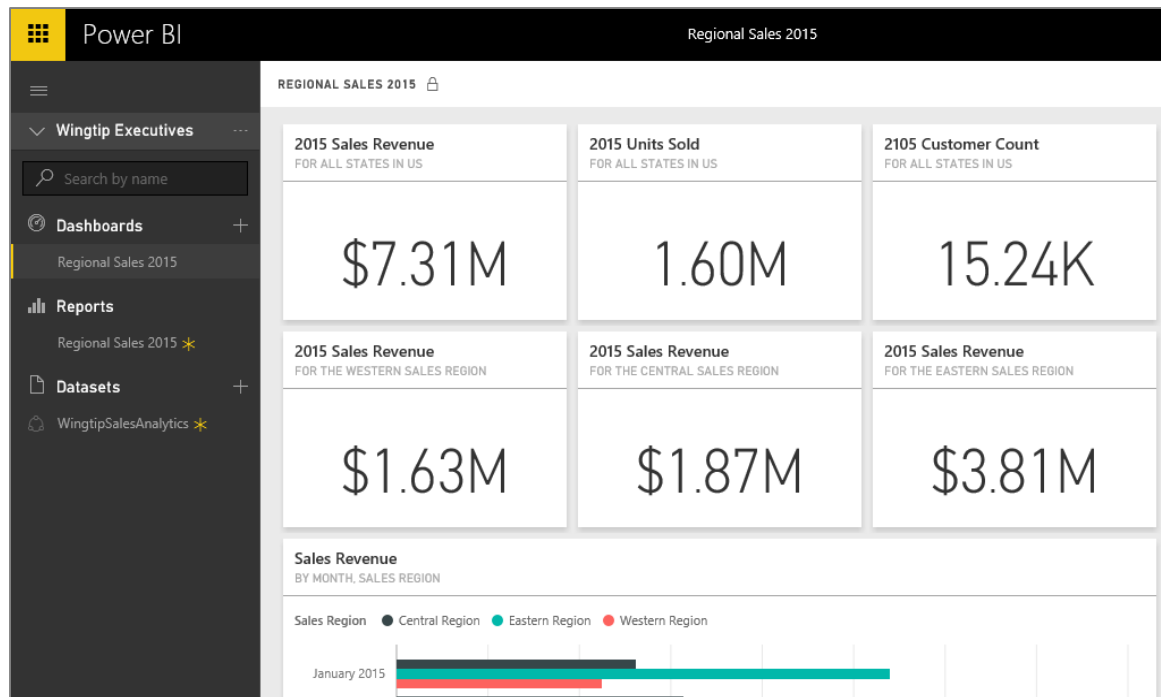
Navigating to the Power BI Service

- Power BI service is accessible through browser
 - Logged in user runs in context of a specific workspace
 - Provides user with access to dashboards, reports and datasets



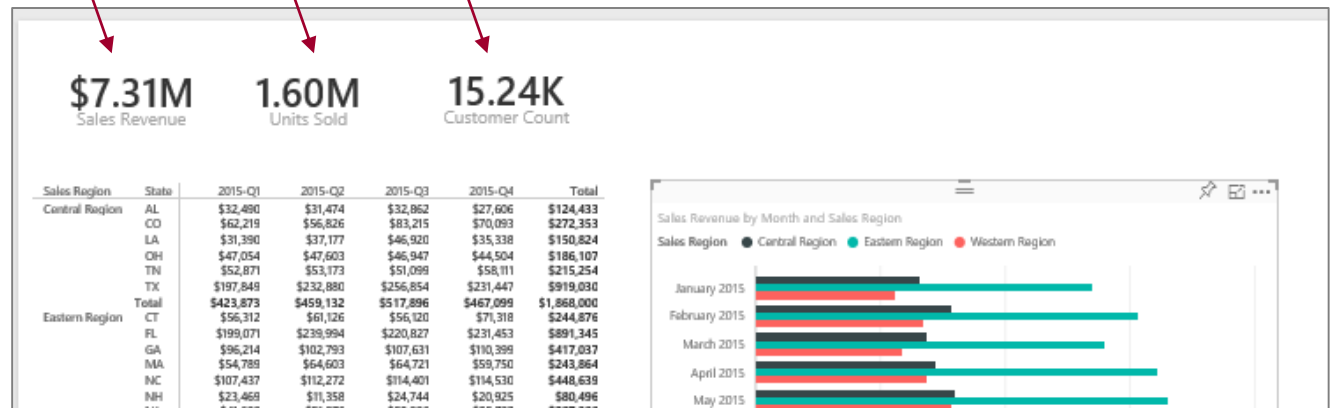
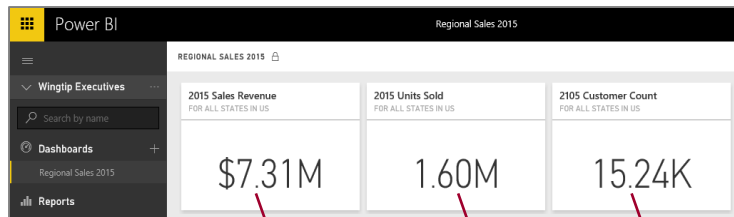
Dashboards and Tiles

- Dashboard is a collection of tiles
 - Tile can be created by pinning visual from a report
 - Tile can be created by pinning query result from dataset



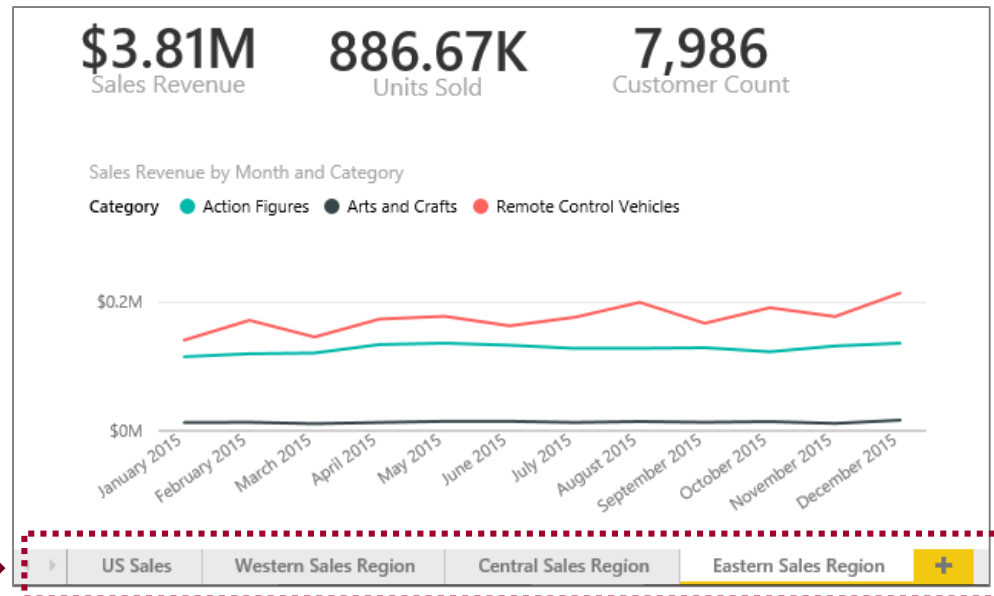
Dashboards and Reports

- Dashboards link users to reports
 - Dashboard tiles designed to provide high-level view
 - Clicking tiles drills down into report to see more detail



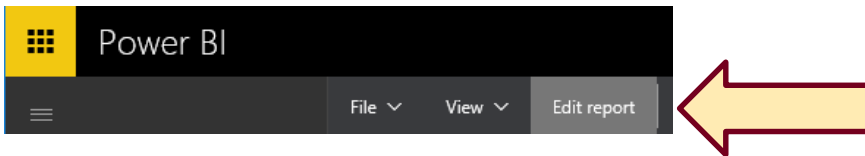
Reports and Pages

- Reports contain one or more pages
 - A report can be designed with a single page
 - A report can be designed with many pages
 - Tabbed navigation located at bottom of report view
 - Each report is associated with exactly one dataset








Report Authoring

- Report initially opens in reading view
 - Click Edit report to switch to edit mode



- Report design tools appear on right side of page

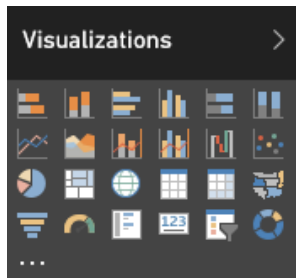
The image shows the Power BI report authoring interface in edit mode. The main area displays a table of product sales data. On the right side, there are panels for 'Visualizations' and 'Fields'.

Product Rank	Product	Product Image	Sales Revenue
1	Godzilla Action Figure		\$1,379,383
2	Twitter Follower Action Figure		\$920,244
3	Captain America Action Figure		\$408,883
4	Perry the Platypus Action Figure		\$313,270
5	Spiderman Action Figure		\$287,516

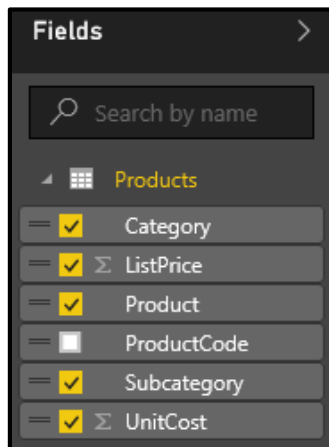
The 'Visualizations' panel on the right shows a list of visual types (Bar, Line, Pie, etc.) and a 'Values' section with a list of fields (Product Rank, Product, Product Image, Sales Revenue). The 'Fields' panel on the right shows a list of fields (Category, Product, Product Rank, Subcategory) and a 'Filters' section with a list of filters (Product(All), Product Image(All), Product Rank is less than or equal to 5, Sales Revenue(All)).

Visuals (aka Visualizations)

- Reports are designed using visual (aka visualizations)
 - Each visual is based on an underlying visualization type
 - Visualization type can be changed using **Visualizations** pane

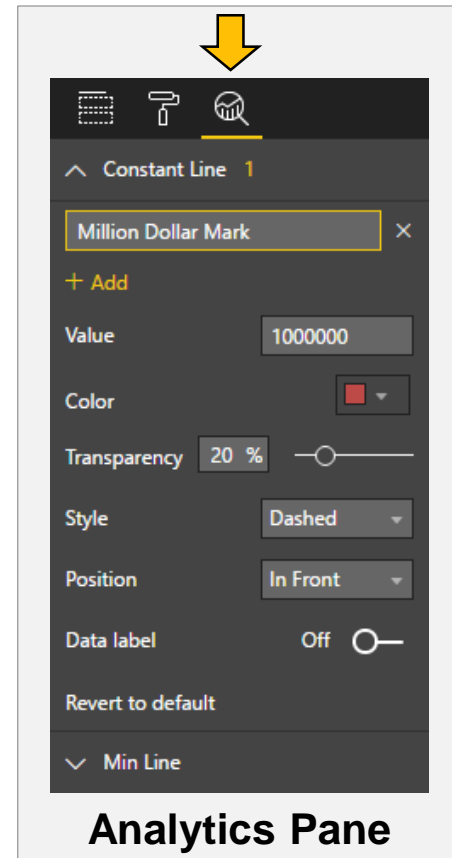
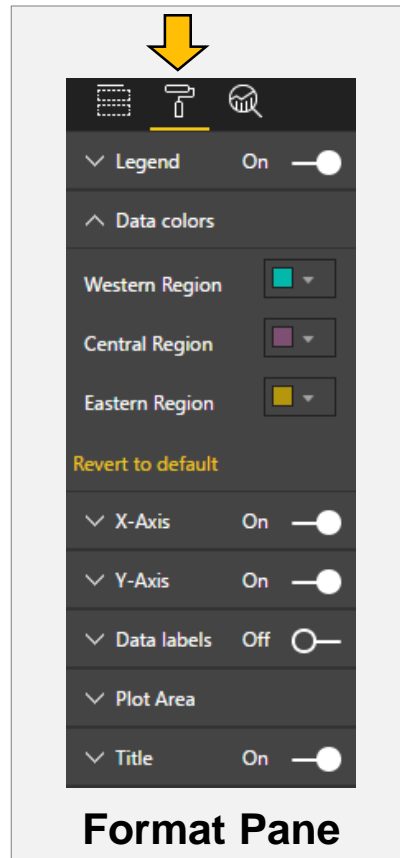
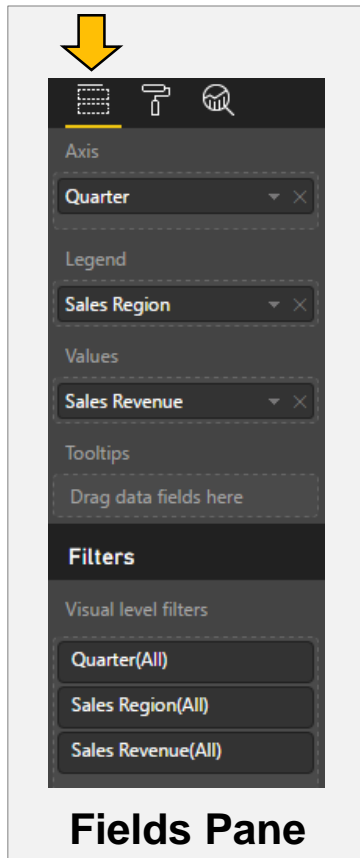


- Visuals creating by using fields from tables inside **Fields** list



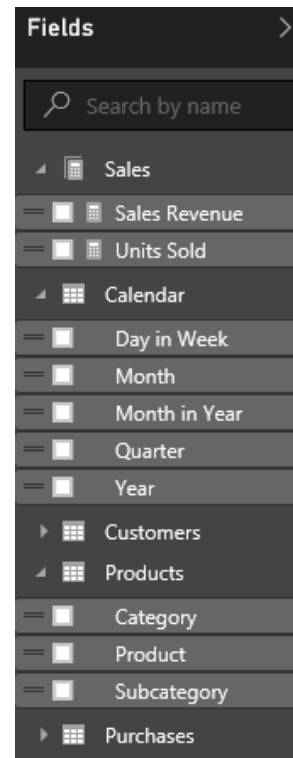
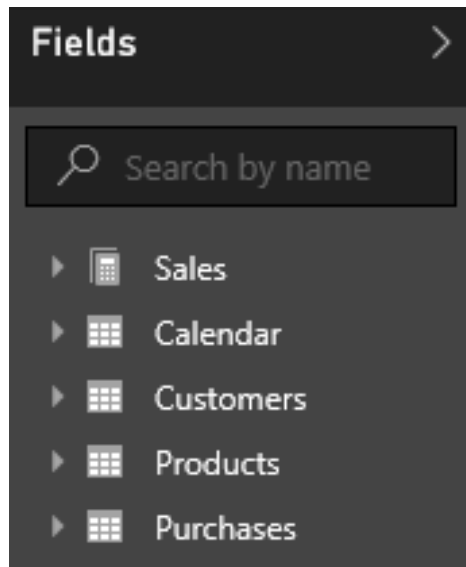
Editing Visual Properties

- Visual properties modified using three property panes
 - Visual properties vary greatly depending on type of visualization



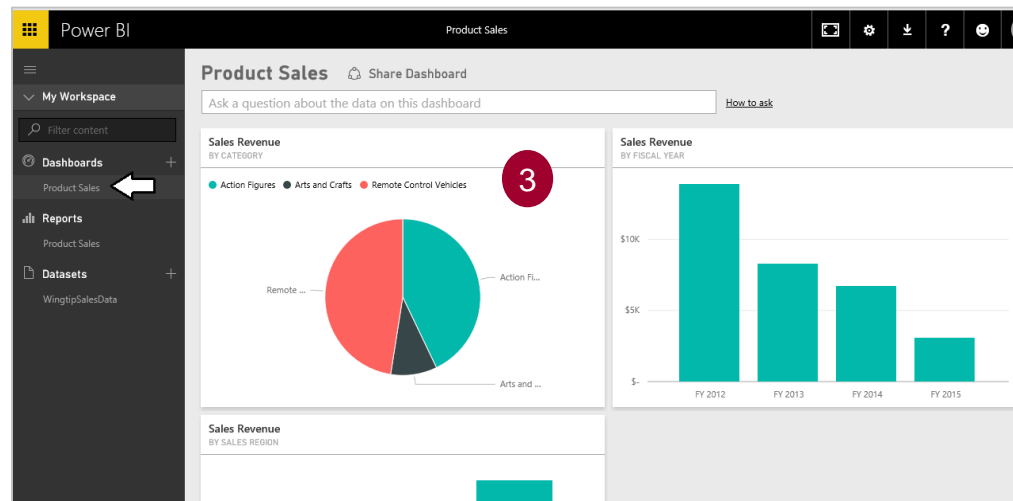
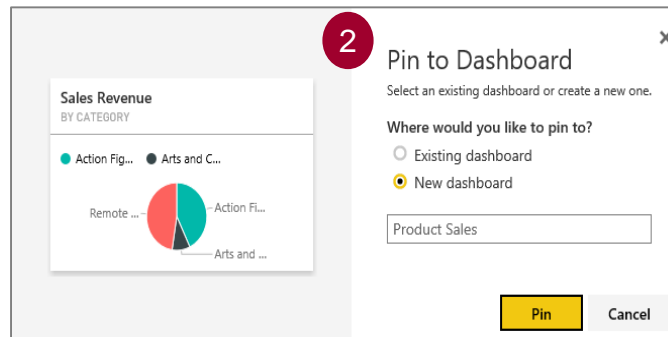
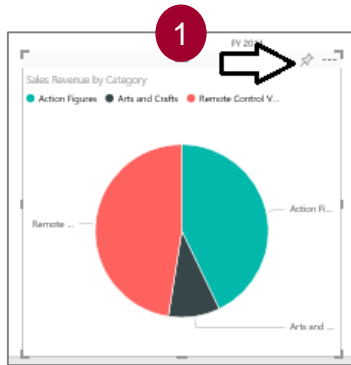
Report and Datasets

- Each report is based on an underlying dataset
 - **Fields** list in report designer shows tables and fields
 - Report author sees tables & fields as dataset consumer



Creating Dashboards

- Dashboards contain tiles
- Tiles created from visuals on report pages





DEMO

Getting started with Datasets, Reports and Dashboards

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Power BI Licensing

- Microsoft initially offered two Power BI licensing options
 - Power BI Free license
 - Power BI Pro license (\$10/month)
 - Everything has been running within a shared capacity
- Microsoft recently introduced Power BI Premium licensing
 - Power BI Premium customers can create dedicated capacities
 - Power BI Premium licensing has monthly fee for dedicated capacity
 - Dedicated capacity remove limits on upload size and # of refreshes
 - Dedicated capacity can serve Power BI content to non-licensed users
- More info at <https://powerbi.microsoft.com/en-us/pricing/>
 - Please ask questions about licensing offline and not during lectures



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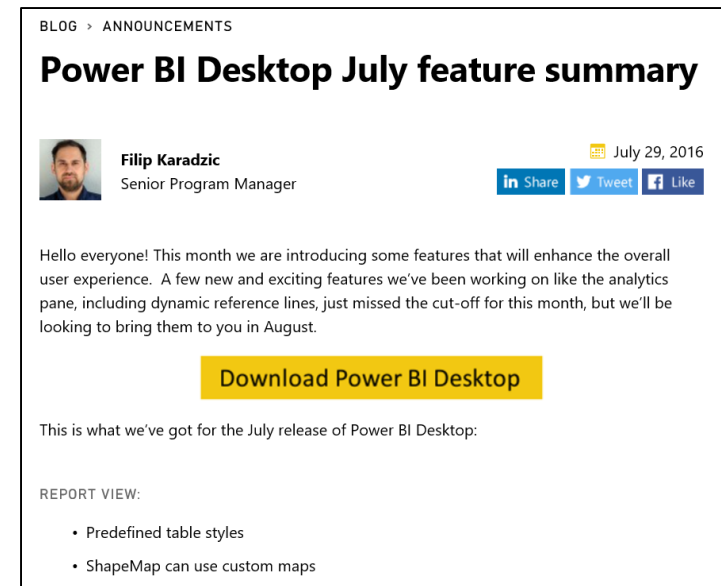
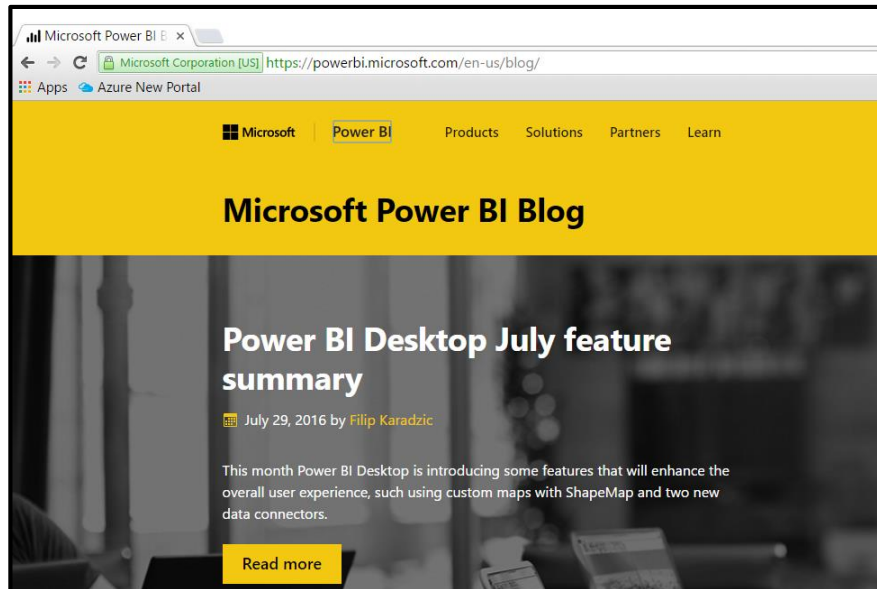


Power BI Team Blog

- Power BI Team Blog is an Essential Resource

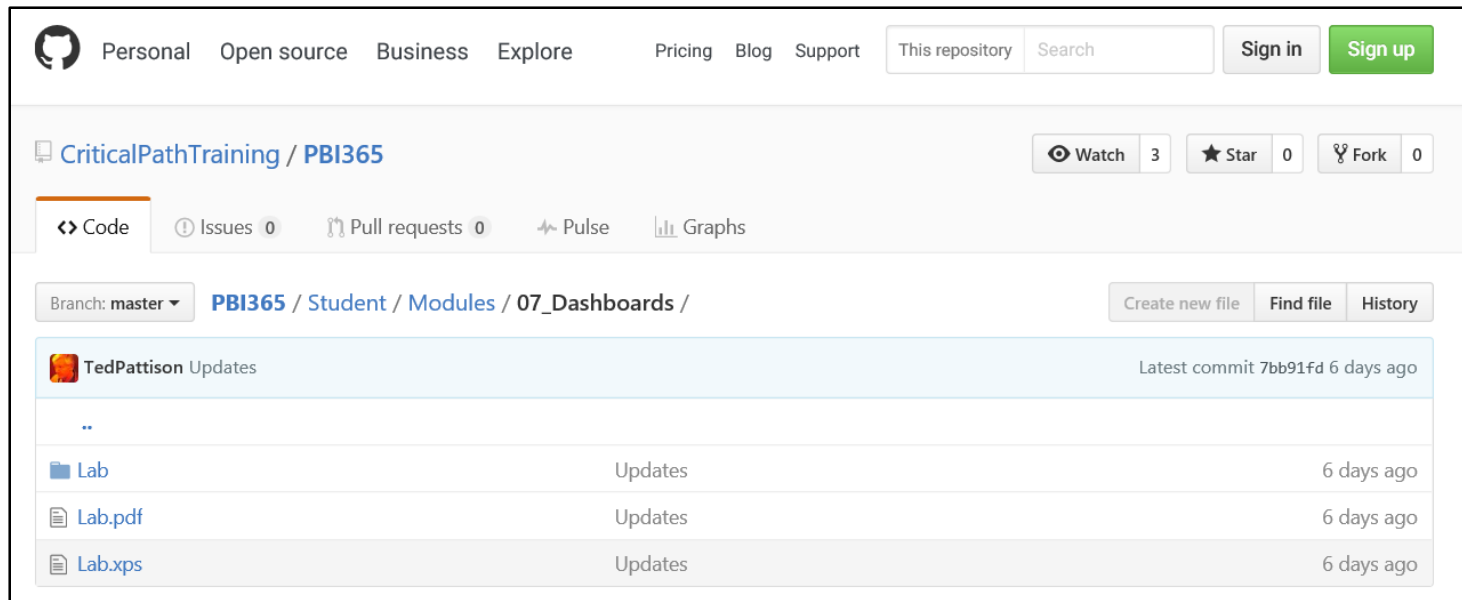
<https://powerbi.microsoft.com/en-us/blog/>

- Be on the lookout for monthly updates



Live Labs for DDPBI

- Student files for this course maintained in GitHub
 - Students files updated on a monthly basis
 - Lab write-ups available in PDF and XPS formats
 - Go to <https://github.com/CriticalPathTraining/DDPBI>



Summary

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