

# Power BI Architecture & Functionality in SharePoint Online



Power BI



SharePoint  
Saturday

9/20/2014

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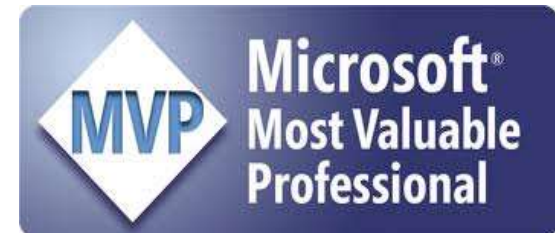


BI Architect with  
BlueGranite  
[www.blue-granite.com](http://www.blue-granite.com)

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# Agenda

## Administering & Managing the Power BI Environment



- Overview of Power BI in SharePoint Online End-to-End
- Comparisons: On-Premises vs. Cloud
- Prerequisites + System Requirements
- Data Source Connectivity Options
- Data Catalog
- Wrap-Up & Questions

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**OVERVIEW  
OF  
POWER BI IN  
SHAREPOINT ONLINE  
END-TO-END**

---

# Overview of Power BI

Insights in Excel  
*1 Billion Office Users*



Discover Analyze Visualize



Collaborate in Office 365  
*1 in 4 enterprise customers on Office 365*



Share Find Mobile



Add-ins to prepare & visualize data:

- ✓ Power Query
- ✓ Power Pivot
- ✓ Power View
- ✓ Power Map

O365 adds additional capabilities:

- ✓ Collaboration, sharing, viewing
- ✓ Scheduled Data Refresh
- ✓ Q&A (Natural Language)
- ✓ Mobile App
- ✓ Enterprise Search
- ✓ Share & Certify Queries

# The 4 Add-Ins

## Excel Workbook

### Power Query

Search for organizational data,  
Search for public (cloud) data,  
Import, merge, shape, & cleanse data,  
Manage shared queries & certify queries

### Power Pivot

Create in-memory data model,  
Create hierarchies & KPIs,  
Create derived fields & calculations

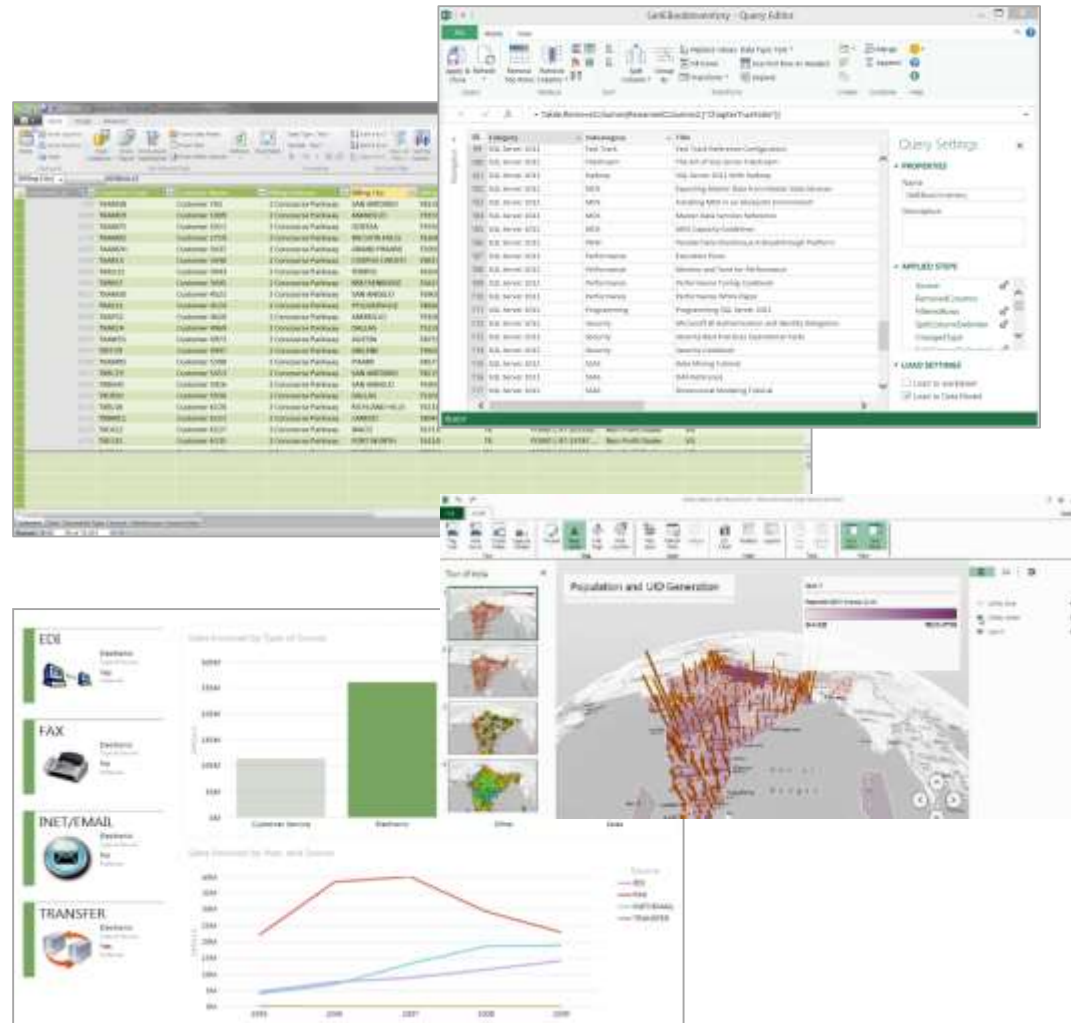
### Power View

Analyze, display  
& visualize the  
data

### Power Map

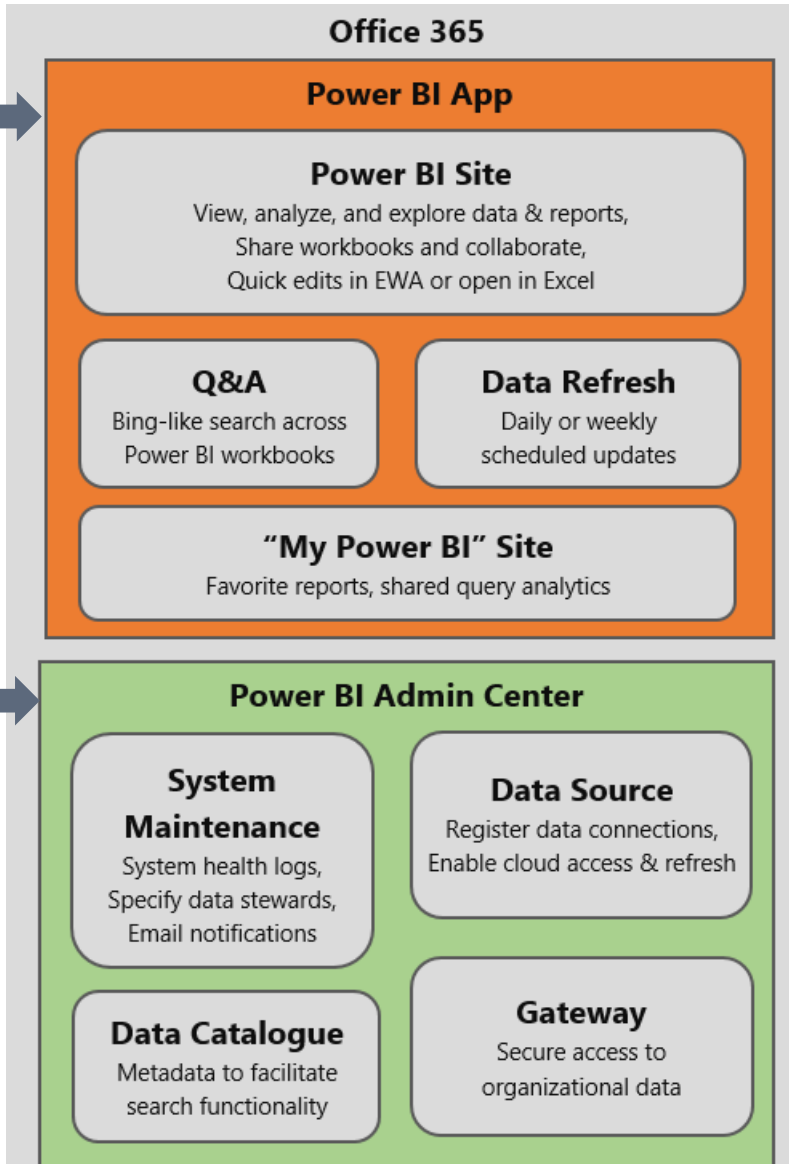
Create maps  
& tours to  
geographically  
view the data

✓ Excel is used for preparation of data & reports

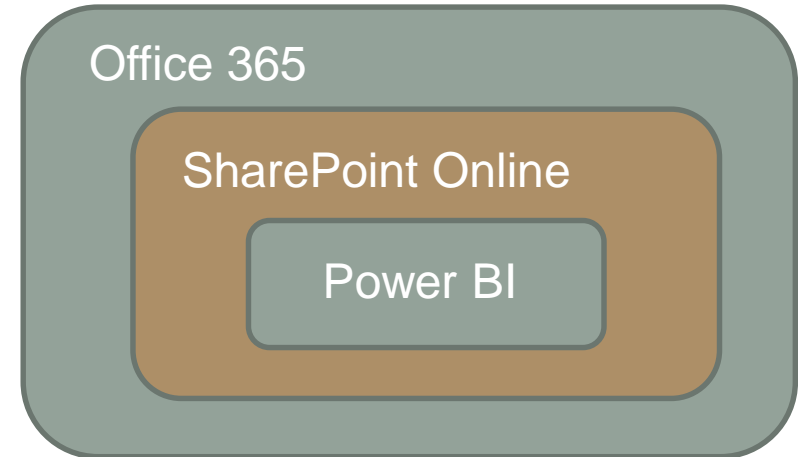


# Office 365

  
**Business User**



  
**IT or BI Admin**

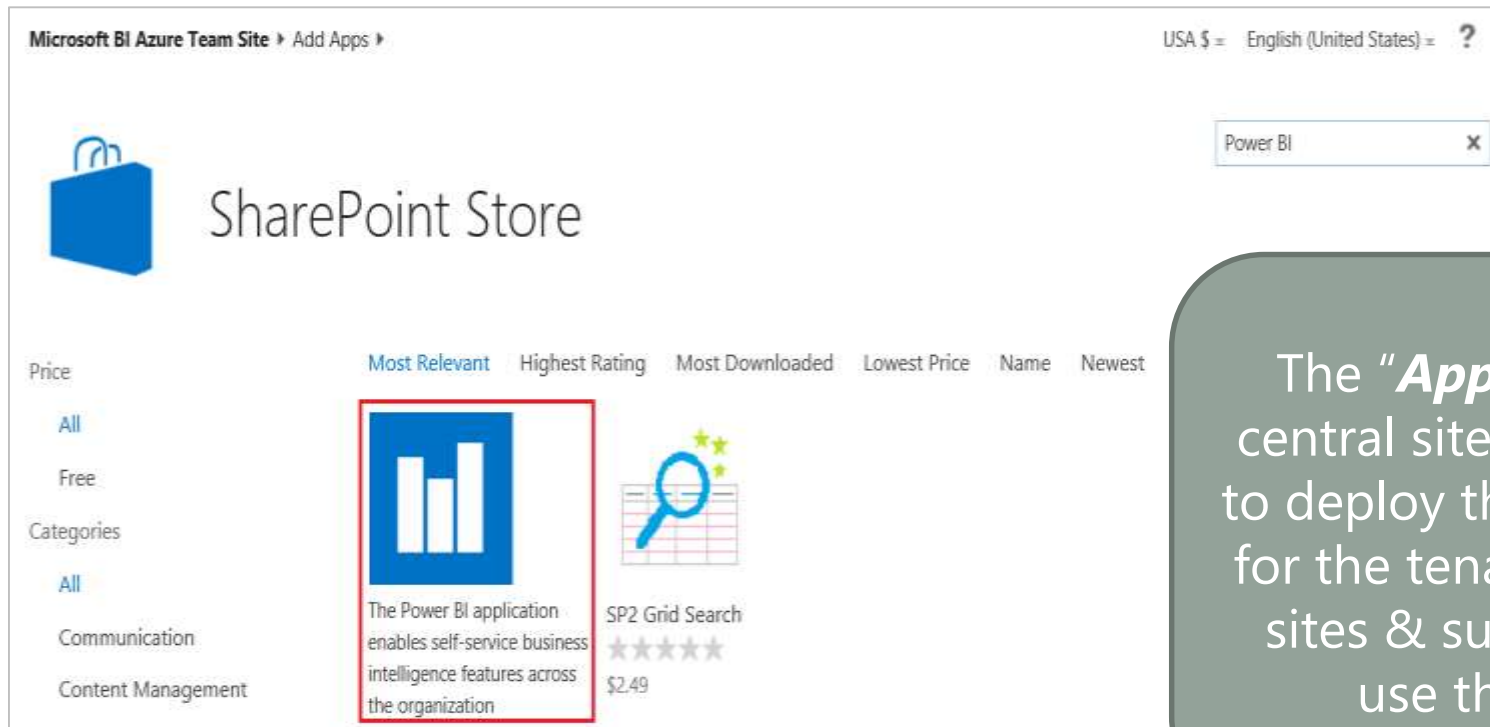


- ✓ O365 is **subscription-based software plus services** in the cloud
- ✓ O365 serves as the collaboration area for Power BI
- ✓ O365 integration significantly extends Excel functionality
- ✓ Power BI is a **multi-tenant service**



# SharePoint App

The **Power BI app** can be downloaded from the **SharePoint Store** (*i.e., to initially set up & provision the Power BI Site*)



The screenshot shows the SharePoint Store interface. At the top, it says "Microsoft BI Azure Team Site" and "Add Apps". There are filters for "Price" (All, Free), "Categories" (All, Communication, Content Management), and sorting options (Most Relevant, Highest Rating, Most Downloaded, Lowest Price, Name, Newest). A search bar contains "Power BI". The Power BI app is highlighted with a red box. Its description reads: "The Power BI application enables self-service business intelligence features across the organization". To its right is the "SP2 Grid Search" app, which has a 5-star rating and a price of \$2.49.

The "**AppCatalog**" central site allows you to deploy the app once for the tenant; then all sites & subsites can use the app

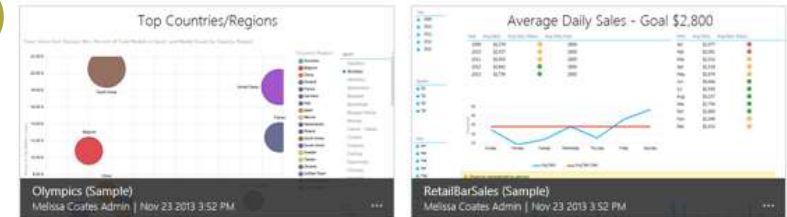
Power BI is currently only available in Office 365 SharePoint Online. It is not available in SharePoint on-premises. (Yet?)

# Delivery Modes for Power BI

## Power BI Site (web browser)

Currently Silverlight  
HTML5 in preview  
Only supports XLSX files

### Featured reports



### Documents

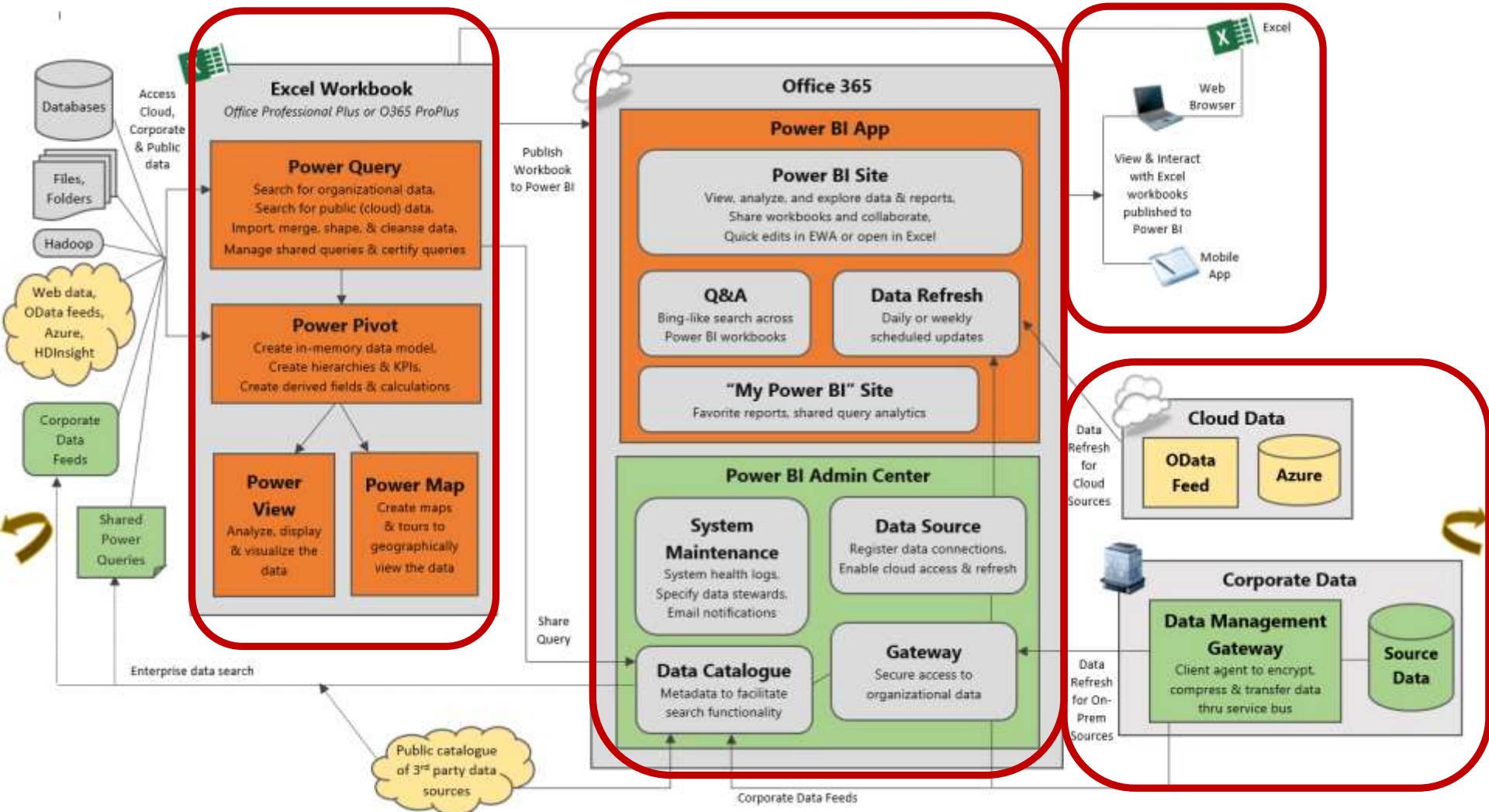


## Mobile App

Download from the Windows Store  
Supports Windows 8.1

iOS app coming later this year

# Power BI Environment End-to-End



# Multiple Admin Centers in Office 365

## ✓ O365 Admin Center

- ❑ Subscriptions, licensing, user accounts, groups
- ❑ Assign **Power BI licenses** to individual users  
*(note: administrator needs license too)*
- ❑ Health status & planned maintenance
- ❑ etc...

## ✓ SharePoint Online (SPO) Admin Center

- ❑ Site collections
- ❑ Storage quotas, server resource quotas
- ❑ SharePoint Store apps (like Power BI)
- ❑ etc...

## ✓ Power BI Site Admin Center

- ❑ Oversee & monitor **system health**
- ❑ Setup **Data Management Gateway** & **Data Sources** to handle refresh
- ❑ Setup **OData feeds** to make corporate data sources easier to discover
- ❑ **Role** management for admins & data stewards

Office 365

← Melissa Coates

details Assign licenses

settings  Microsoft Office 365 Plan E3

licenses  Yammer Enterprise  
These licenses do not need to be individually assigned

more  Windows Azure Active Directory Rights  
 Office 365 ProPlus  
 Lync Online (Plan 2)  
 Office Online  
 SharePoint Online (Plan 2)  
 Exchange Online (Plan 2)

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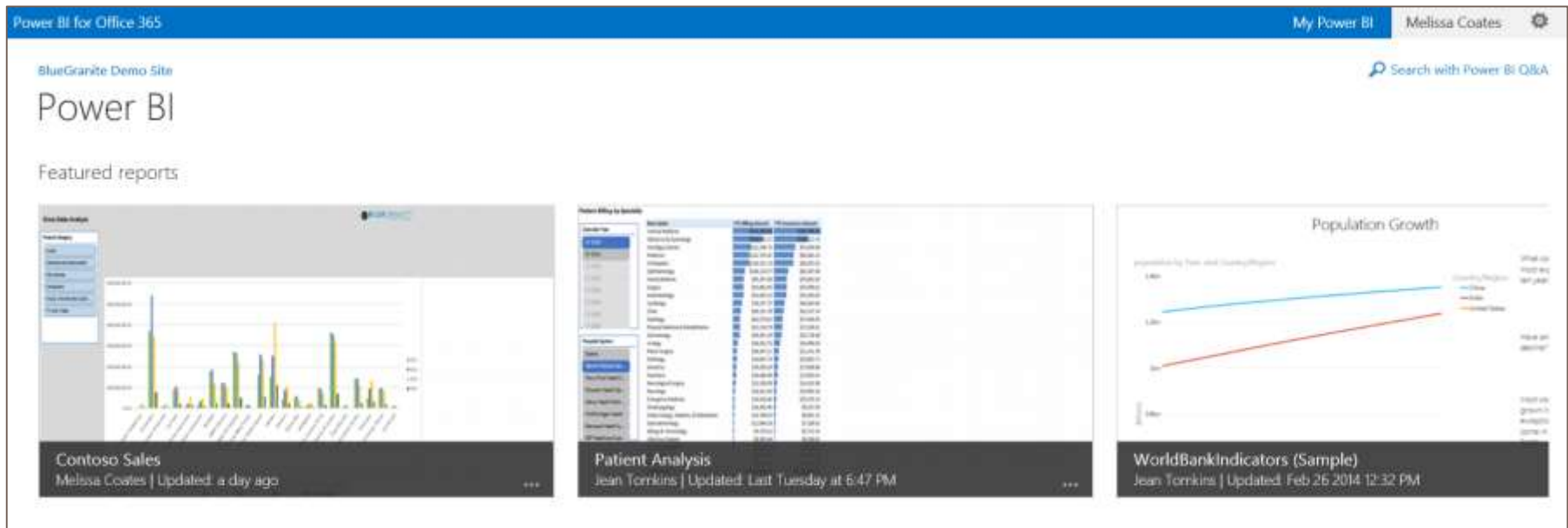
Microsoft Power BI for Office 365 Add-On  
 Microsoft Power BI Information Services Plan 1  
 Microsoft Power BI Reporting and Analytics Plan 1

[Compare the various license options](#)

save cancel

# Ways to Access Power BI Workbooks (1/4)

**Power BI Site** (i.e., the Power BI App in the browser)



The screenshot displays the Power BI web interface. At the top, there is a blue header with "Power BI for Office 365" on the left, "My Power BI" and the user name "Melissa Coates" on the right, and a search icon with the text "Search with Power BI Q&A". Below the header, the page title is "BlueGranite Demo Site" and "Power BI". A section titled "Featured reports" contains three report thumbnails:

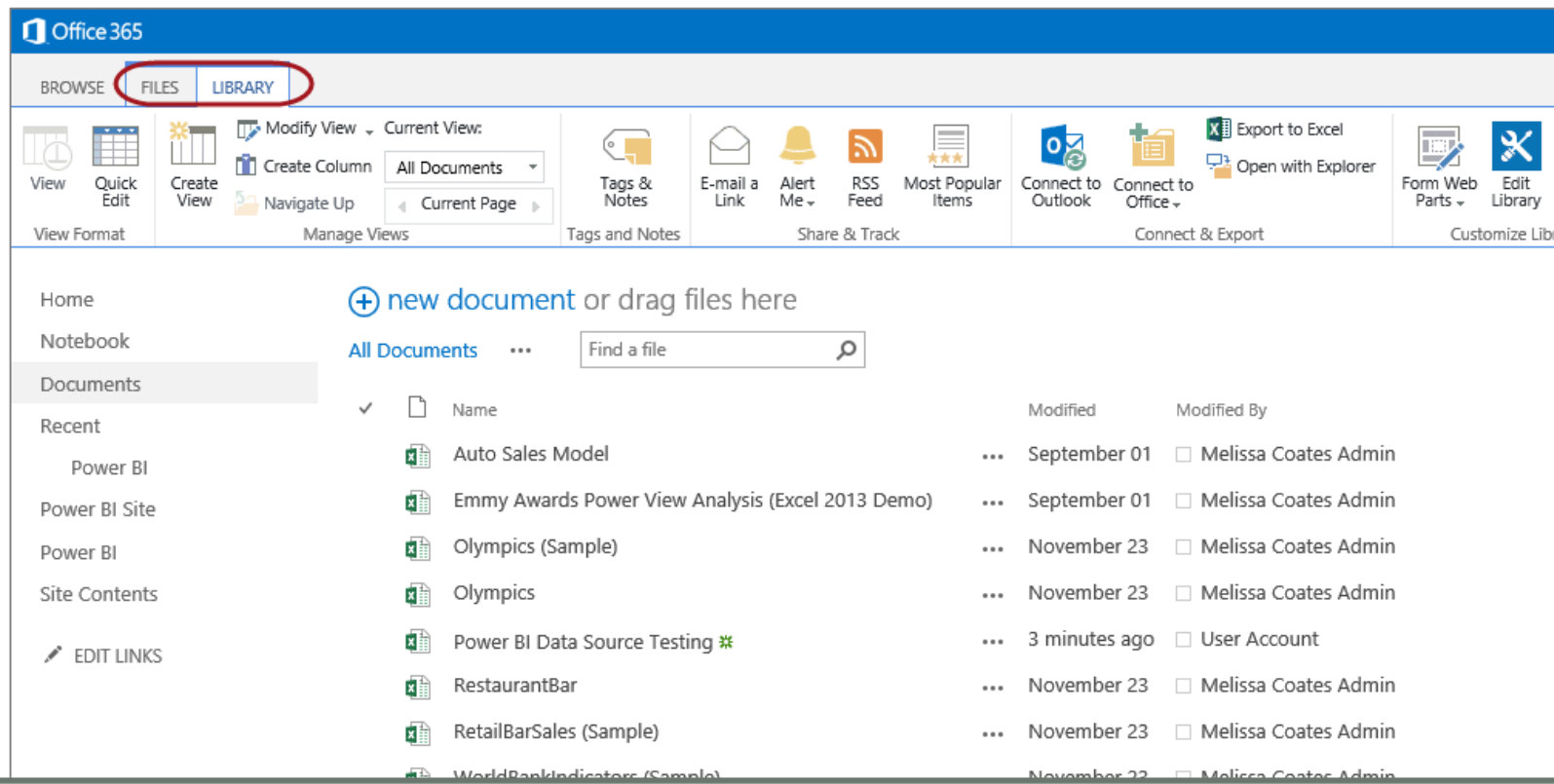
- Contoso Sales:** A bar chart showing sales data. Below the chart, it says "Contoso Sales" and "Melissa Coates | Updated: a day ago".
- Patient Analysis:** A table with multiple columns and rows of data. Below the table, it says "Patient Analysis" and "Jean Tomkins | Updated: Last Tuesday at 6:47 PM".
- WorldBankIndicators (Sample):** A line chart titled "Population Growth" showing data for different regions. Below the chart, it says "WorldBankIndicators (Sample)" and "Jean Tomkins | Updated: Feb 26 2014 12:32 PM".

<https://sites.powerbi.com/sharepointpages/SPIntegration/PowerBI/pages/PowerBI.html?languageLocale=en-US&regionalLocale=en-US&SPHostUrl=https://DomainName.sharepoint.com/SubsiteNameIfApplicable>

# Ways to Access Power BI Workbooks (2/4)

## Traditional Document Library View

The “All Documents” view provides access to library **settings & permissions**



[https://DomainName.sharepoint.com/SubsiteNameIfApplicable/\\_layouts/15/start.aspx#/DocumentLibraryName/Forms/AllItems.aspx](https://DomainName.sharepoint.com/SubsiteNameIfApplicable/_layouts/15/start.aspx#/DocumentLibraryName/Forms/AllItems.aspx)



# Ways to Access Power BI Workbooks (3/4)

## Direct URL Access – No Menu Bar

WopiFrame.aspx is invoked to view the workbook in an iFrame

Row Labels	Net Sales	Net Sales - CTD	Net Sales - % Growth PY CTD	Net Sales - % of Total CTD	Calls - CTD	Calls - % of Total CTD	Coverage - CTD	Frequency - CTD
Account 1491	\$257,382.44	\$709,267.84	21.19 %	3.48 %	94	2.04 %	26.67 %	5.88
Account 1276	\$209,173.67	\$475,053.87	-10.82 %	2.33 %	30	0.65 %	26.83 %	2.73
Account 1422	\$202,669.17	\$439,379.37	-18.42 %	2.16 %	132	2.86 %	49.12 %	4.71
Account 1787	\$154,920.48	\$274,858.68	-18.97 %	1.35 %	20	0.43 %	20.00 %	5.00
Account 1147	\$153,805.56	\$424,242.26	-12.34 %	2.08 %	38	0.82 %	25.00 %	3.80
Account 1273	\$152,141.96	\$398,243.84	35.74 %	1.95 %	54	1.17 %	50.00 %	2.57
Account 1557	\$140,113.63	\$268,904.47	-15.28 %	1.32 %	92	1.99 %	56.76 %	4.38
Account 1715	\$135,469.58	\$252,042.66	16.66 %	1.24 %	44	0.95 %	72.73 %	5.50
Account 1312	\$128,095.06	\$331,898.60	131.05 %	1.63 %	18	0.39 %	30.30 %	1.80
Account 1437	\$125,984.86	\$483,776.10	2.66 %	2.37 %	34	0.74 %	21.88 %	4.86
Account 1139	\$119,879.37	\$213,733.35	41.87 %	1.05 %	6	0.13 %	30.77 %	1.50
Account 1172	\$116,274.27	\$280,007.61	27.37 %	1.37 %	79	1.71 %	40.43 %	4.16
Account 949	\$114,334.10	\$228,254.97	19.59 %	1.12 %	33	0.71 %	26.79 %	2.20

[https://DomainName.sharepoint.com/\\_layouts/15/WopiFrame.aspx?sourcedoc={GUIDForReport}&action=embedview](https://DomainName.sharepoint.com/_layouts/15/WopiFrame.aspx?sourcedoc={GUIDForReport}&action=embedview)

# Ways to Access Power BI Workbooks (4/4)

## Direct URL Access – With Menu Bar

WopiFrame.aspx is invoked to view the workbook in an iFrame



Excel Online | BlueGranite Demo Site | Sales Enablement Analysis | Melissa Coates

FILE EDIT WORKBOOK SHARE DATA FIND COMMENTS

Month: 02-2014 Territory Hierarchy: All

Row Labels	Net Sales	Net Sales - % Growth PY	Net Sales - % of Total	Calls	Calls - % of Total	Coverage	Frequency	Net Sales - CTD	Net Sales - % Growth PY CTD	Net Sales - % of Total CTD	Calls - CTD
Account 1491	\$257,382.44	16.99%	3.34%	40	2.20%	15.00%	4.44	\$709,267.84	21.19%	3.68%	94
Account 1276	\$209,173.67	-32.80%	2.72%	13	0.71%	17.07%	1.86	\$475,053.87	-10.82%	2.33%	30
Account 1422	\$202,669.17	-9.34%	2.82%	62	3.40%	33.33%	3.26	\$439,379.37	-18.42%	2.16%	132
Account 1787	\$154,920.48	-2.17%	2.01%					\$274,858.68	-18.97%	1.35%	20
Account 1147	\$153,805.56	-10.37%	2.00%					\$424,242.26	-12.34%	2.08%	38
Account 1273	\$152,141.96	-0.82%	1.98%	15	0.82%	21.43%	1.67	\$398,743.84	35.74%	1.95%	54
Account 1557	\$140,113.63	-0.64%	1.82%	42	2.31%	35.14%	3.23	\$268,904.47	-15.28%	1.32%	92
Account 1715	\$135,469.58	26.08%	1.76%	14	0.77%	36.36%	3.50	\$252,042.66	16.66%	1.24%	44
Account 1312	\$128,095.06	126.99%	1.66%					\$311,898.60	131.05%	1.63%	18
Account 1437	\$125,984.86	-31.51%	1.64%	20	1.10%	15.63%	4.00	\$483,776.10	2.66%	2.37%	34
Account 1139	\$119,879.37	80.50%	1.56%	1	0.05%	7.69%	1.00	\$213,733.35	41.87%	1.05%	6
Account 1172	\$116,274.27	49.90%	1.51%	28	1.54%	23.40%	2.55	\$280,007.61	27.37%	1.37%	79
Account 949	\$114,334.10	43.62%	1.48%	13	0.71%	12.50%	1.86	\$228,254.97	19.59%	1.12%	33
Account 1650	\$110,615.01	-5.45%	1.44%	60	3.29%	39.34%	2.50	\$212,707.31	-4.84%	1.04%	116
Account 1620	\$107,544.32	48.34%	1.40%	21	1.15%	19.30%	1.91	\$180,716.52	-16.28%	0.89%	87
Account 1288	\$103,938.42	-55.31%	1.35%	47	2.58%	30.00%	3.13	\$293,860.60	-38.09%	1.44%	97
Account 1092	\$103,179.54	3.26%	1.34%	22	1.21%	26.32%	4.40	\$237,274.26	13.34%	1.16%	52
Account 1160	\$98,752.86	-27.04%	1.28%	13	0.71%	15.38%	2.17	\$230,771.41	2.58%	1.13%	33
Account 1651	\$98,698.62	-39.42%	1.28%	14	0.77%	24.32%	1.56	\$225,470.87	-31.95%	1.11%	27

Menu Bar

Field List to interact with PivotTable in the browser

PivotTable Fields

ACTIVE | ALL

Choose fields:

- Account
  - Account ID
  - Account Name
  - Ranked Accounts - Calls CTD
  - Ranked Accounts - Calls LY CTD
  - Ranked Accounts - Sales Units CTD
  - Ranked Accounts - Sales Units LY
- Date
  - Month Hierarchy
  - More Fields

Drag fields between areas below:

FILTERS	COLUMNS
Month	Values
Territory Hierarchy	

ROWS	VALUES
Account Name	Net Sales
	Net Sales - % G...
	Net Sales - % o...
	Calls
	Calls - % of Total
	Coverage

[https://DomainName.sharepoint.com/\\_layouts/15/WopiFrame.aspx?sourcedoc={GUIDForReport}&action=view](https://DomainName.sharepoint.com/_layouts/15/WopiFrame.aspx?sourcedoc={GUIDForReport}&action=view)





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**COMPARISON:  
ON-PREMISES SHAREPOINT  
VS.  
HYBRID POWER BI**

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# Feature Comparisons



(1/3)

	 SharePoint Power Pivot Gallery	 Power BI for Office 365
(1) Workbooks as a Data Source (i.e., ability to segregate data model from reports)	Yes	No
(2) Row-Level Security	Yes (Only if SSAS used as data source)	No (Only Power Pivot currently which is File-Based Security)
(3) Power View for SharePoint (rdlx)	Yes	No
(4) Power View for Excel	Some support	Yes
(5) Max Workbook Size	2GB	Not enabled: 10MB Enabled: 250MB**
(6) Browser Edit Max	No	30MB
(7) Thumbnail Previews	Yes (Silverlight)	Yes (Silverlight→HTML)

\*\* 250MB max applies to data in the data model - only 10MB or less can be in the worksheet.



# Feature Comparisons

(2/3)

	 SharePoint Power Pivot Gallery	 Power BI for Office 365
(8) Single View Across Multiple Doc Libraries	No	Yes
(9) Q&A Natural Language	No	Yes
(10) Mobile App & HTML5 in Web	No (Silverlight)	Yes
(11) Enterprise Search (OData and/or Shared Power Query)	No	Yes
(12) Use of Power Query for Importing to Power Pivot	No	Yes (Still only some supported for refresh)
(13) Licensing	SharePoint Enterprise + SQL Server Enterprise	Office 365 with Power BI
(14) Fast Release Cycles	No	Yes

# Feature Comparisons

(3/3)

	 SharePoint Power Pivot Gallery	 Power BI for Office 365
(15) SSAS Pre-Optimized	No	Yes
(16) Browser View Options	Gallery View Theatre View Carousel View All Documents	App View All Documents
(17) Power View Export to PPT	Yes	No
(18) Management Dashboard	Yes	No

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# PREREQUISITES + SYSTEM REQUIREMENTS

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# Prerequisite: Office

(1/2)

## ✓ Office

- ❑ **O365 ProPlus** or Office 2013 Professional Plus (reduced functionality if using an older version of Excel or Power Pivot)
- ❑ Preferably use the **Click-to-Run** (streamed) installation of Office instead of MSI (to get latest features such as Synonyms in Power Pivot)
- ❑ All users need to be on the **same version** of Office (same build #) or errors will occur when users collaborate on a file
- ❑ **64-bit** is highly recommended if possible

## ✓ Power Pivot

- ❑ Enabled through COM add-ins (it's native Excel 2013 add-in)

## ✓ Power Query

- ❑ Separate download & installation (*still in Public Preview mode – licensing hasn't been announced yet*)
- ❑ **Internet connectivity** for Online Search
- ❑ **Signed in** to the account which is associated to the Power BI subscription

# Prerequisite: Office

(2/2)

## ✓ Power View





- ❑ Enabled through COM add-ins (it's a native Excel 2013 add-in)
- ❑ **Internet connectivity** for spatial coordinates & geocoding using Bing Maps
- ❑ Silverlight 5

## ✓ Power Map

- ❑ Enabled through COM add-ins (it's a native Excel 2013 add-in)
- ❑ To be supported & get updates, it requires an **O365 ProPlus** subscription
  - ❑ Preview (GeoFlow) will remain available in Office 2013 but no updates & not supported
  - ❑ Will be added to next major version of Excel as a native add-in
- ❑ **Internet connectivity** for spatial coordinates & geocoding using Bing Maps
- ❑ Microsoft .NET Framework 4.0
- ❑ DirectX10 (DDI version 10 or higher) ←Power Map won't work in many virtualized environments
- ❑ Latest graphics driver / display adapter

# Prerequisite: SharePoint Online Plan 2

- ✓ The O365 **E3 or E4 Plan** already has the SPO Online Plan 2 prerequisite. More benefits for the price if Power BI is added onto E3 or E4.

	Small business		Midsize business	Enterprise			
See also <a href="#">Office 365 ProPlus</a> <a href="#">Education plans</a> <a href="#">Government plans</a> <a href="#">Nonprofit plans</a> <a href="#">FAQ</a> <a href="#">Office for home</a>	Office 365 Small Business	Office 365 Small Business Premium	Office 365 Midsize Business	Hosted email (Exchange Online Plan 1)	Office 365 Enterprise E1	Office 365 Enterprise E3	Office 365 Enterprise E4
	\$5.00	\$12.50	\$15.00	\$4.00	\$8.00	\$20.00	\$22.00
	user/month	user/month	user/month	user/month	user/month	user/month	user/month
	annual payment			annual commitment			
	<a href="#">Buy now</a>	<a href="#">Buy now</a>	<a href="#">Buy now</a>	<a href="#">Buy now</a>	<a href="#">Buy now</a>	<a href="#">Buy now</a>	<a href="#">Buy now</a>
		<a href="#">Free trial</a>	<a href="#">Free trial</a>			<a href="#">Free trial</a>	
<b>User maximum:</b>	25 users	25 users	300	Unlimited	Unlimited	Unlimited	Unlimited
<b>Office applications:</b> Subscription to Office for up to 5 PCs/Macs per user.	Desktop versions of: 		Desktop versions of: 	Desktop versions of: 		Desktop versions of: 	

*Pricing is not including Power BI subscription*



# Prerequisite: Power BI Licensing

- ✓ Can be purchased for just a subset of O365 user base.
- ✓ Administrator needs a Power BI license.

Choose the right option based on what you already own:

If you own a subscription to Office 365 E3 or E4 plans you have access to SharePoint Online Plan 2 and Excel and require the following additional components:

If you subscribe to Office 365 ProPlus, or own a license of Office 2013 Professional Plus, you require the following additional components:

If you do not currently have access to SharePoint Online Plan 2 and the latest version of Excel you will need the following:

## Power BI

Add-on for E3/E4 Subscribers

~~\$33~~ \$20\* user/month  
(billed annually \$240/year)  
Preview Sign up

## Power BI

Standalone

\$40 user/month  
(billed annually \$480/year)  
Preview Sign up

## Power BI

Standalone + Office 365 ProPlus

\$52 user/month  
(billed annually \$624/year)  
Preview Sign up

All features available for all Power BI customers

### Power BI Office 365

- BI Sites
- Scheduled Data Refresh
- Enterprise Data Search
- Data Stewardship
- Mobile BI

### SharePoint Online Plan 2

### Excel

- Data Discovery & Access
- Data Modeling
- Data Visualization

BI Sites	●	●	●
Scheduled Data Refresh	●	●	●
Enterprise Data Search	●	●	●
Data Stewardship	●	●	●
Mobile BI	●	●	●
SharePoint Online Plan 2		●	●
Excel			
Data Discovery & Access			●
Data Modeling			●
Data Visualization			●

\* 40% off promotion for Office 365 E3 or E4 customers. Offered through June 30 2014. Pricing shown is US Commercial ERP through the Microsoft Online Subscription Program

↑  
The Excel 2013 ProPlus & SPO Plan 2 prerequisites are satisfied by the E3 or E4 plan

↑  
The Excel 2013 ProPlus prerequisite is satisfied by the Office purchase - need to add SPO Plan 2

↑  
No prerequisites purchased yet

# Prerequisite: Newer, Patched Computers

## ✓ **Client Computer**

- ❑ O365 has policies that require client computers be kept up to date - this ensures consistent & predictable product support

## ✓ **Browser**

- ❑ Latest or immediately prior version of IE
- ❑ The latest release of Chrome, Firefox, or Safari

## ✓ **Operating System for Office 2013 and O365 ProPlus**

- ❑ Windows 7
- ❑ Windows 8
- ❑ Windows Server 2008 R2
- ❑ Windows Server 2012

## ✓ **System Specs**

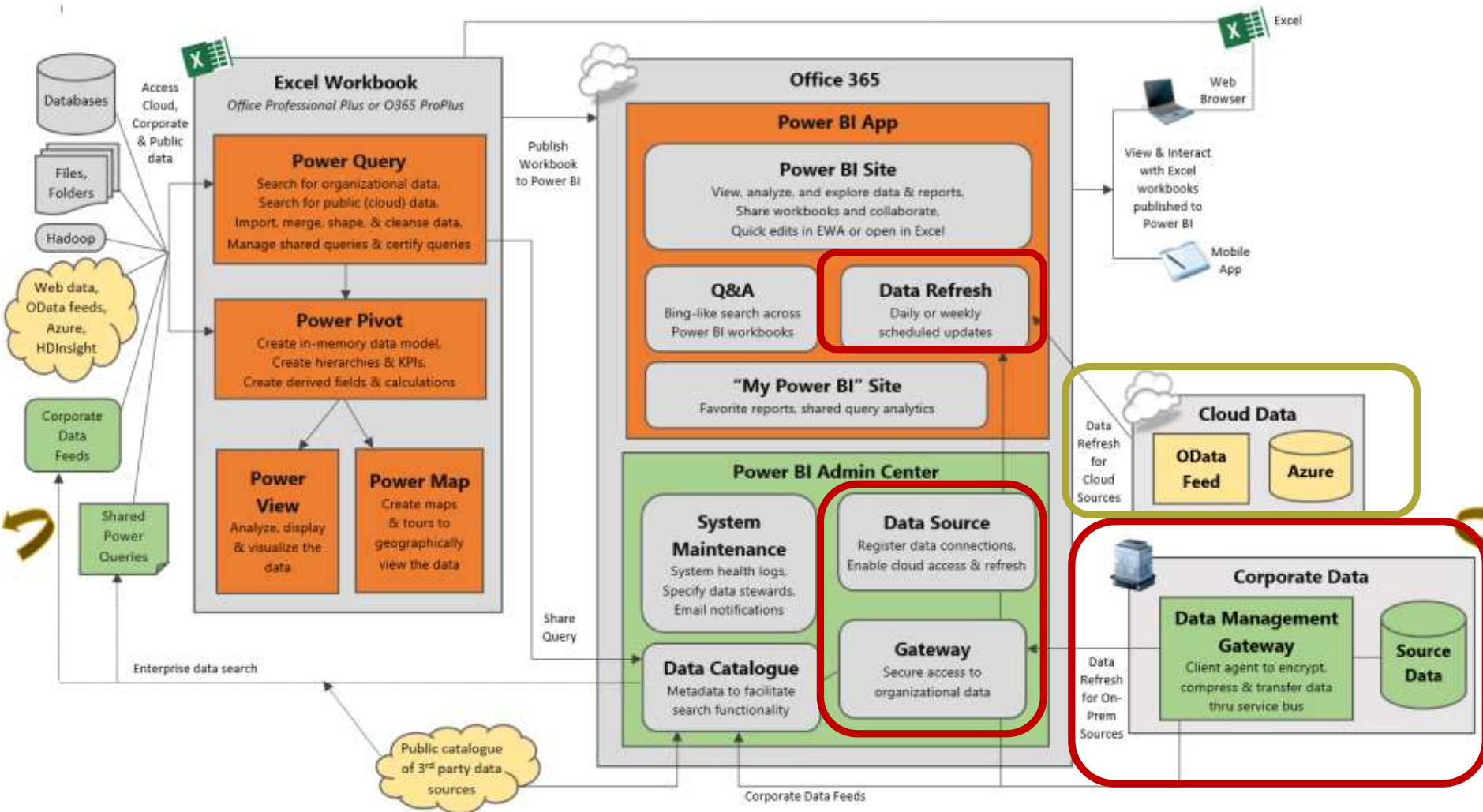
- ❑ As much as you can afford for the business user machines (especially RAM)

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# DATA CONNECTIVITY OPTIONS

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# Role of the Data Management Gateway



# Data Management Gateway

(1/2)

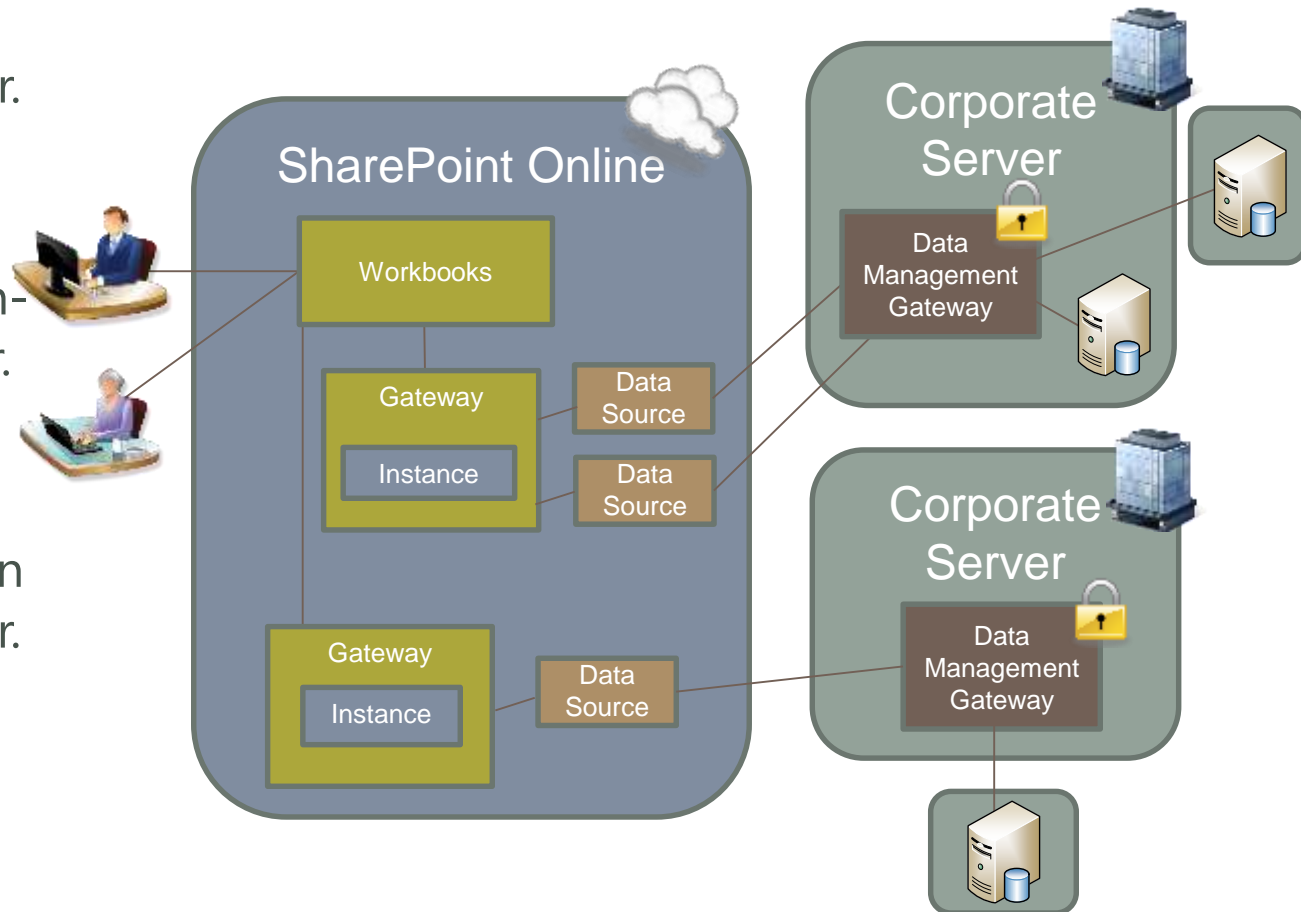
## **Purpose #1: Data Refresh.**

*Referred to as enabling "cloud access"*

**Gateway:** Set up in Power BI Admin Center. Points to a server.

**Data Management Gateway:** Installed on-premises on the server. Uses key provided by the O365 Gateway.

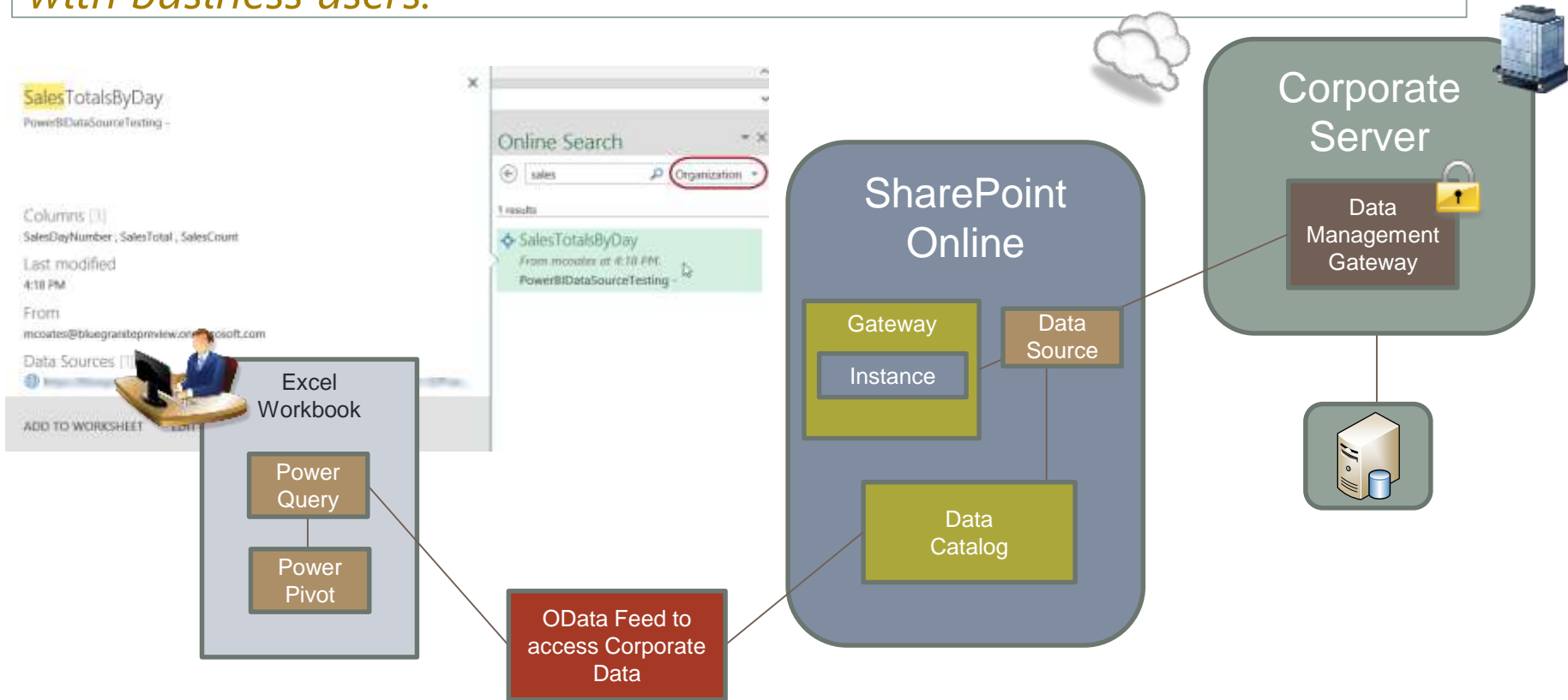
**Data Source:** Set up in Power BI Admin Center. A virtual endpoint which refers to a database.



# Data Management Gateway

(2/2)

**Purpose #2: OData Feeds.** To expose an OData feed which can be consumed by Power Query. This is one way to share corporate data with business users.



✓ For a table to "eligible" to be part of the OData feed, it must either have a Primary Key or one non-nullable column.

# When is Data Management Gateway Required?



## Cloud-Only Data Source:

Data management gateway is **not required** for a single cloud source. It uses connection string stored in the workbook. *(Even the Azure VM.)*

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## On-Premises data source(s):

On-premises data sources do **require a data management gateway**. Credentials in PBI Admin Center take precedence over connection string.

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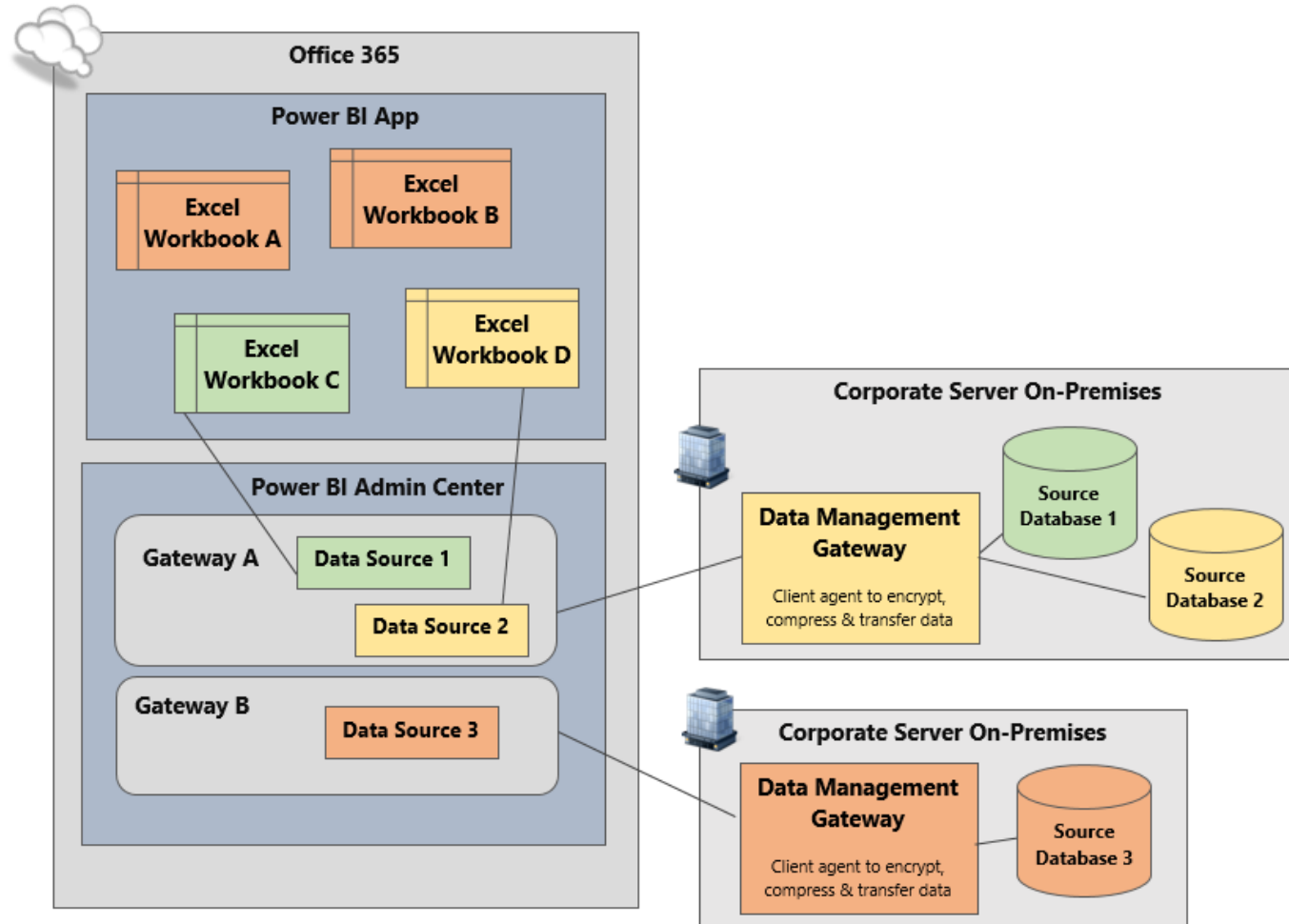


## Multiple Cloud Sources or Cloud + On-Premises (Mashup):

A mashup does **require a data management gateway** – the mashup operation needs an engine & the DMG provides this. So > 1 cloud source requires a DMG. Credentials in PBI Admin Center then take precedence.

# On-Prem Data Refresh

The Administrator could extract the connection string from the workbook, but still wouldn't see the user's password...so the *credentials in Power BI Admin Center will take precedence.*



Workbooks A and B → Data Source 3

Workbook C → Data Source 1

Workbook D → Data Source 2



# Data Refresh “Matching Process” (1/2)

The following needs to match between what's defined in the workbook and what's defined in the Power BI Admin Center:

1. **Server name** matches between workbook and a Gateway in the Power BI Admin Center
2. **Database name** matches between workbook and a Data Source in the Power BI Admin Center (it is case sensitive!)
3. Same **provider** is used in the workbook and a data source in the Power BI Admin Center
  - ✓ Default in Admin Center: OLE DB
  - ✓ Default in Power Pivot: OLE DB if SQL not installed; else Native Client Provider
4. Access control list: user who is defining the data refresh has **permission** to the data source in Power BI Admin Center
  - ✓ Users and Groups page of Data Source definition

*\*\*Note the User ID and Password in the workbook connection are not one of the criteria for matching.\*\**

# Data Refresh “Matching Process” (2/2)

- ✓ Microsoft refers to this matching process as a “**Discovery Process**” which uses a virtual DNS to decouple the data source from its consumption. \*
- ✓ As of May 2014: **29% of issues/errors** in the Power BI Admin Center are due to the matching process. \*
- ✓ The matching process has big implications if data coming out of the source is restricted by row-level-security.

\* Source: Samuel Zhang presentation, 2014 PASS BA Conference

# Scheduled Data Refresh Options

(1/2)

- ✓ Options are **daily** or **weekly**
- ✓ Failure **notifications** can be sent, but not success notifications
- ✓ Time specified is “as close as possible to” – how close depends on “fair load distribution algorithms” used in the multi-tenant service

← Patient Analysis.xlsx

history settings

Saving overwrites the refresh settings defined by Jean Tomkins. 'Discard Changes' cancels your changes.

Refresh schedule ON

1. Select data connections in the Data Model to refresh

PatientDW

2. Configure refresh schedule

Frequency

Sunday  Monday  Tuesday  Wednesday  
 Thursday  Friday  Saturday

Ends by

As close as possible to  :   AM  PM

3. Send notifications to

# Scheduled Data Refresh Options

(2/2)

- ✓ Schedule will only go **90 days forward**
- ✓ An e-mail alert is sent to the notifications list one week prior to the end date (*this is usually the workbook owner not the administrator*)
- ✓ If you own many workbooks, to save time consider scheduling all to expire last day of the month

## Power BI for Office 365

❗ Patient Analysis.xlsx: schedule expires in a week

Scheduled data refresh for this report is about to expire on Friday 7/4/2014. Extend it by updating the Ends By date in the settings.

[view refresh history](#)

Thank you,  
The Power BI for Office 365 team

SUPPORT INFORMATION

Report owner: Jean Tomkins

**Microsoft**

[Privacy Statement](#) | Microsoft Privacy,  
Microsoft Corporation, One Microsoft Way, Redmond, Washington 98052  
USA

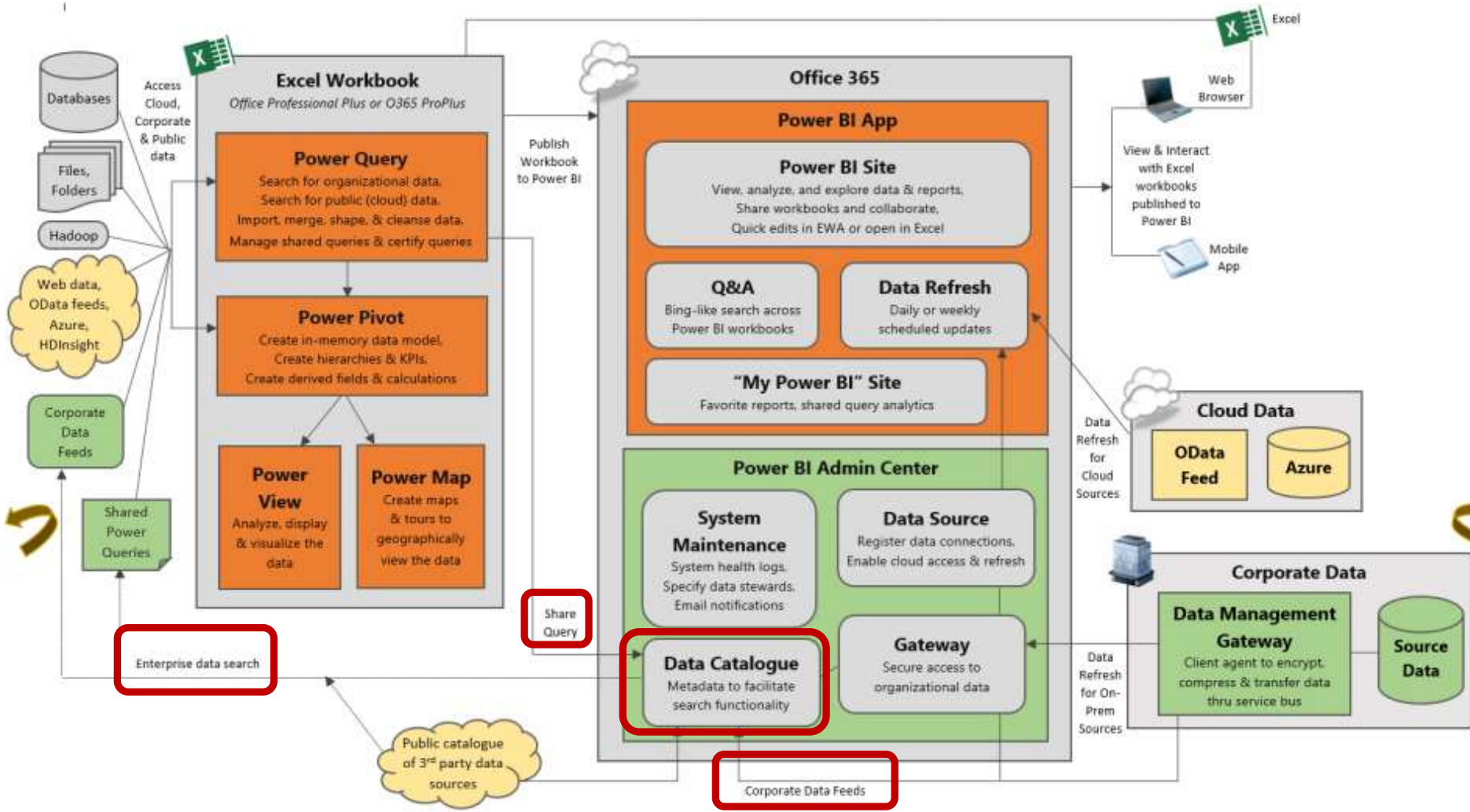
---

# DATA CATALOG

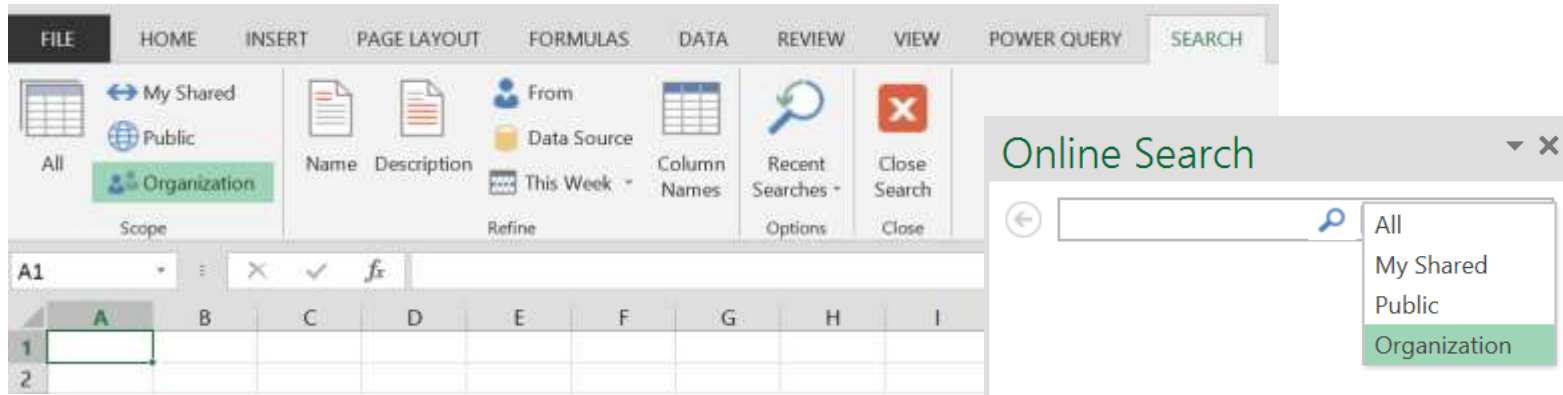
---

# Data Catalog

Includes two things to expose corporate data for Enterprise Data Search (aka Online Search): **Data Feeds** and **Shared Queries**

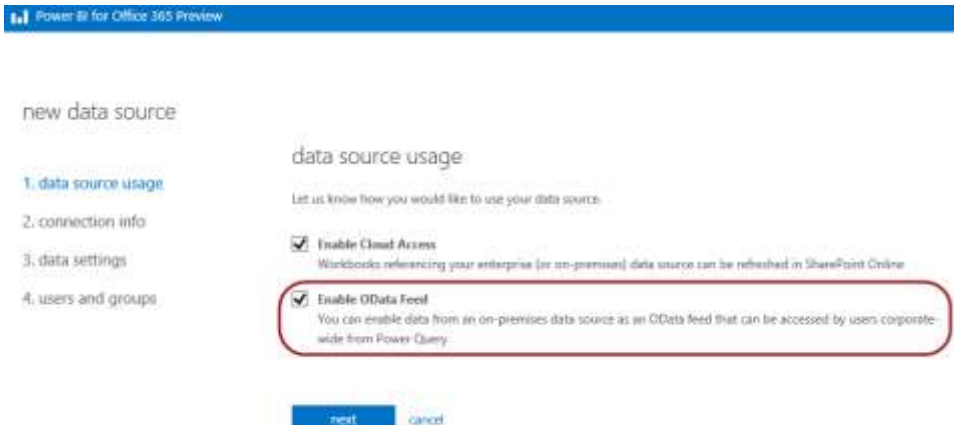


# Online Search



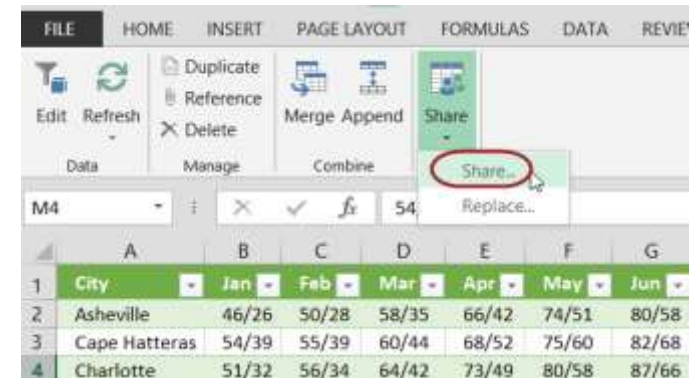
## Exposing Database Tables & Views:

Shared by the **Admin** with an OData feed in Power BI Admin Center (Data Source)



## Shared Queries:

Shared by **User** within Power Query

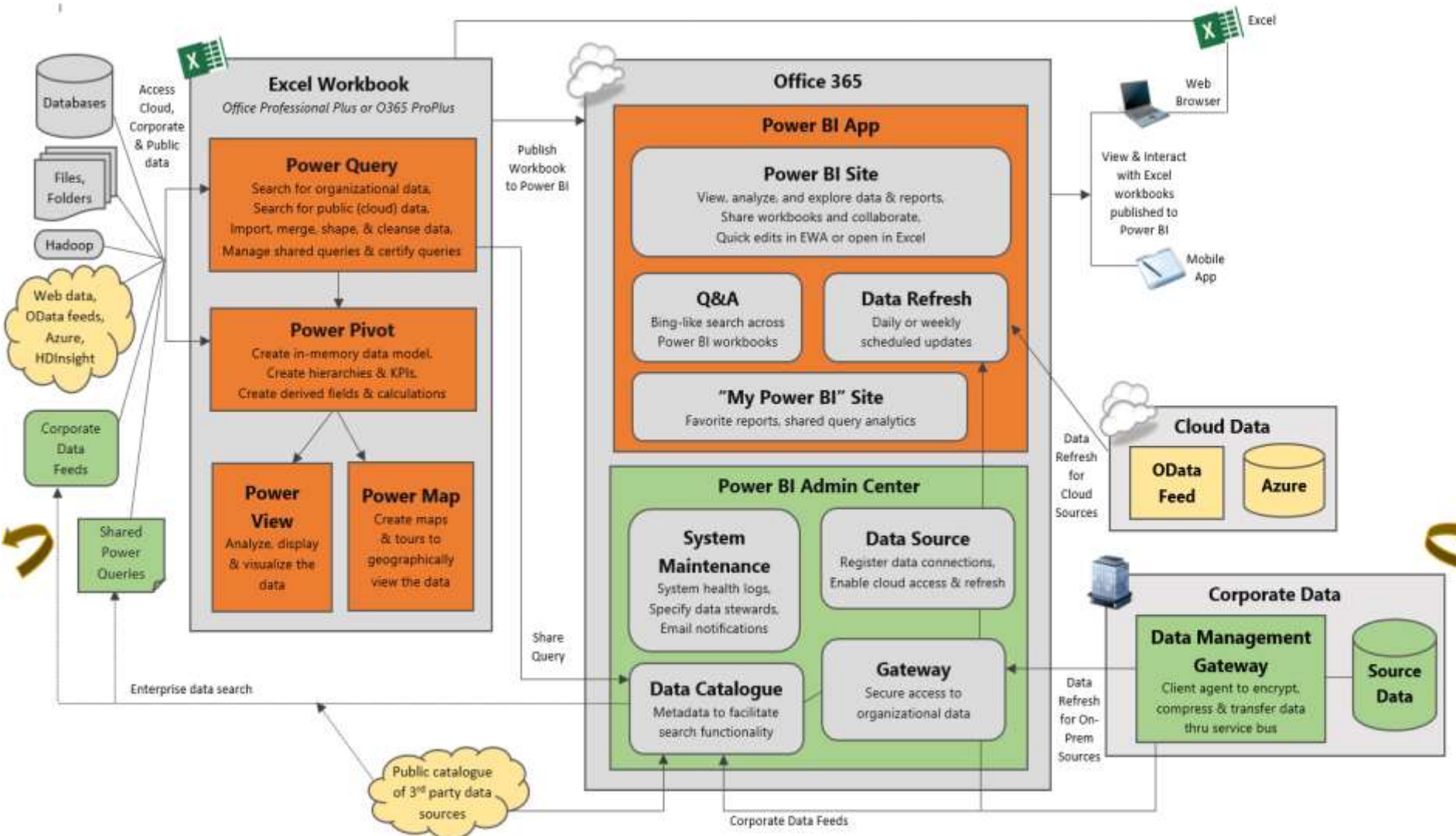


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**WRAP UP  
&  
QUESTIONS**

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# Additional Details

## **Power BI Security Overview**

<http://www.sqlchick.com/entries/2014/6/8/power-bi-security-overview>

## **Data Source “Matching Process”**

<http://www.sqlchick.com/entries/2014/4/29/data-source-connectivity-for-scheduled-data-refresh-in-power-bi>

## **When Is a Data Management Gateway Needed in Power BI?**

<http://www.sqlchick.com/entries/2014/3/16/when-is-a-data-management-gateway-needed-in-power-bi>

## **Differences Between Power BI and SharePoint BI**

<http://www.sqlchick.com/entries/2014/5/26/differences-between-power-bi-and-sharepoint-bi>

## **Click-To-Run (Streaming) Version of Office**

<http://www.sqlchick.com/entries/2013/12/19/getting-new-power-pivot-features-other-office-2013-updates.html>

## **Ways to View Content Published to a Power BI Site**

<http://www.sqlchick.com/entries/2013/12/15/ways-to-view-content-published-to-a-power-bi-site.html>

# Thanks for attending!

Slides at  
[sqlchick.com](http://sqlchick.com)



(Presentations & Downloads page )

*Session  
Evaluations:*



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