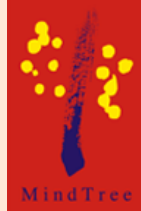


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Joy Rathnayake

POWERPIVOT FOR EXCEL 2010
AND SHAREPOINT 2010



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ABOUT ME – JOY RATHNAYAKE

- Mentor – Solid Quality Mentors
- MVP – SharePoint Server
- Microsoft Certified Trainer (MCT)
- Author, Tech-Ed Speaker
- Blog – <http://www.joyr.ws>
- Web – <http://www.SharePoint24x7.com>
- Email – send2joy@gmail.com



AGENDA

- Introducing PowerPivot for Excel
- Loading and preparing Data into PowerPivot
- Creating and designing PowerPivot Reports
- Introducing PowerPivot for SharePoint
- Working with PowerPivot Workbooks in SharePoint
- Using the PowerPivot Management Dashboard

SPEAKING OF FAMILIAR TOOLS...

- What feature, which is present in just about every BI tool/ application on the market, helps people to edit, format, customize, share, print, and archive their work?

EXPORT TO EXCEL

Corporate Performance Dashboard

Loss Balance Sheet Working Capital Employees

Year To Date

Actual	Budget
12,842.6	11,283.7
7,134.8	8,128.7
5,707.7	3,155.0

Recent News (click on row for details):

- 2008-03-06 February figures
- 2008-03-11 JohnD has been promoted
- 2008-03-12 100st Cockpit user added
- 2008-04-05 March Figures

March Figures

March figures are ready to analyse. Please rollout child

Cognos PowerPlay Web Explorer

ABM Unloaded FYD6

Fiscal Quarter Program Type Activity & Process Activity Only Activity Type

Cost as values	Cost
2006_Q1	\$289,600,971
Fiscal Quarter	\$289,600,971

Organization (Code & Name)

- 10100 - OFFICE OF
- 10102 - REGIONWII
- 10110 - ENVIRONME
- 10120 - ASSISTANT
- 10130 - REGIONAL
- 10131 - DIVISION C
- 10132 - PACIFIC IS
- 10133 - COLUMBIA
- 10135 - DIVISION C
- 10137 - DIVISION C

Sales (YTD)

78

Export Data Wizard

Data Wizard - Export Data

Customize MS Excel export options.

Data format Extensions Advanced

Fields Options Styles

- EMPLOYEE_ID
- FIRST_NAME
- LAST_NAME
- EMAIL
- PHONE_NUMBER
- HIRE_DATE
- JOB
- SAL
- COM
- MAN
- DEP

Font Borders Fill Aggregate

Font Arial Size 10

Group View - Westfields Bakery - Demo

Microsoft Excel - Book1

Start Tag Info	Description	Yes	No	Yes	No	Yes	No	Yes	No
100110	Building - 410 E. Main St								
100110	100110 Clearing and Drilling								
100110	100110 Thermopex Bag Heat Sealer								
100110	100140 Conveyor Belt								
100110	100160 Dental Cutter								
100110	100160 Shear Moulder (1)								
100110	100115 Doughnut Glazer								
100110	100190 Doughnut Fryer								
100110	100190 Doughnut Symboler								
100110	100200 Glasa Filler								
100110	100210 Dough Roller (1)								
100110	100220 Parking Lot								
100110	100220 Parking Lot Flood Lights								
100110	100263 Subways								



Freeze Headers To Excel

Arrival Time	Block Mins	Op Days	To/Wk
0730	907	1
0730	90	12345..	5
0730	906.	1
0745	90	1234567	7
0755	85	..3.5..	2
0800	90	12.4...	3
0815	90	123456.	6
0825	85	123456.	6
0830	907	1
0830	90	12345.	5

New Open Save Send Share Export

Export

Scheduled Export

SETTING THE SCENE...

- Excel has been users' favorite tool for data
- Starting with Excel 2007 MS invested heavily in Business Intelligence in Excel
 - Lots of new and redesigned BI features in Excel
 - Excel Services extends the reach of spreadsheets beyond the desktop
- The goal:
Make Excel & Excel Services the tool of choice for users doing Business Intelligence

EXCEL 2010 OVERVIEW



Excel 2010 helps you communicate your data clearly, work from anywhere and gain deeper insight into your data - all with better performance and scalability.

Leveraging cutting-edge hardware

- 64-bit support
- Broad multi-threading support
- Responsiveness improvements
- Graphics performance
- HPC integration

Data analysis and insight

- The BI Analyst tool
 - Address key BI gaps
 - Managed Self-Service BI with PowerPivot
 - Slicers & Sparklines
- Number-crunching
 - Function accuracy
 - Re-engineered Solver

Web spreadsheets

- Browser-based spreadsheet editing
- Collaboration
- Hosted online Excel

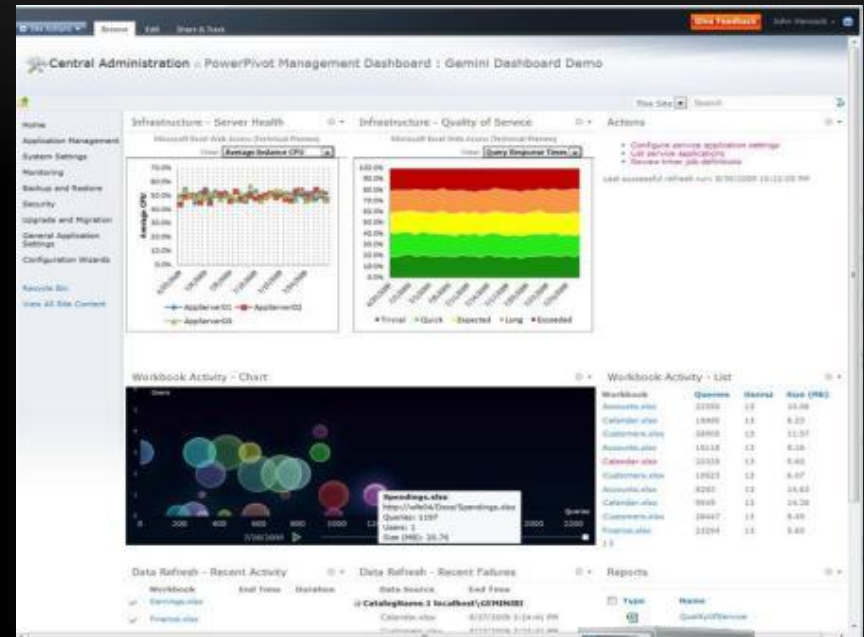
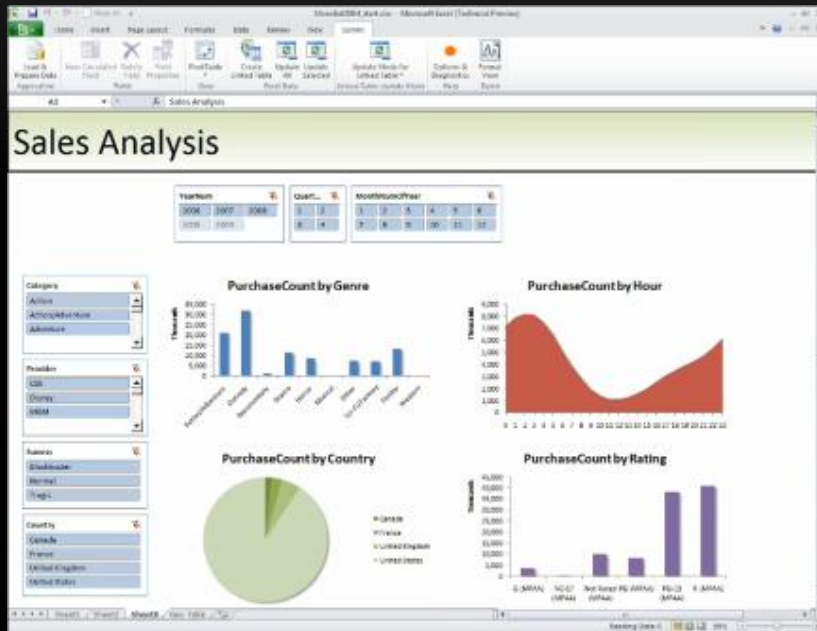
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INTRODUCING POWERPIVOT

PowerPivot add-in for Excel

PowerPivot add-in for SharePoint



Microsoft®
Excel 2010

Microsoft®
SharePoint 2010
Microsoft®
SQL Server 2008 R2



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WHAT IS POWERPIVOT?

- A collection of applications and services that supports the creation of user-managed, data-driven BI solutions
- Supports relating and enriching large volumes of heterogeneous data
- Visualizes data using PivotTables, PivotCharts, filters, and slicers
- Solutions may be published to, and managed in, SharePoint
- Functionality is delivered by two add-ins:
 - SQL Server PowerPivot for Excel add-in
 - SQL Server PowerPivot for SharePoint add-in



POWERPIVOT FOR EXCEL ADD-IN

- Client add-in that extends Excel 2010 to support extremely large data sets
 - Achieved with a client-side version of Analysis Services, known as the VertiPaq processor
- A separate PowerPivot Window is used to load, explore, relate, and enrich data with calculations
- Imports and relates data from corporate, local, and ad hoc data stores
- Results in a new data source embedded in the Excel workbook that becomes the basis for interactive reports

WHO IS THE POWERPIVOT FOR EXCEL?

- Excel users who know how to structure and work with relational data in workbooks
- SharePoint users who use team sites and document management features
- Database and IT professionals who:
 - Want to delegate business data development tasks to those who need the data most
 - Need to retain sufficient control so that data can be secured, monitored, reproduced, and archived



POWERPIVOT WORKFLOW

Load and Prepare Data

- Define Calculated Columns with DAX

Design the PowerPivot Report(s)

- Define Measures with DAX

Format the Report(s)

Publish to SharePoint (Optional)

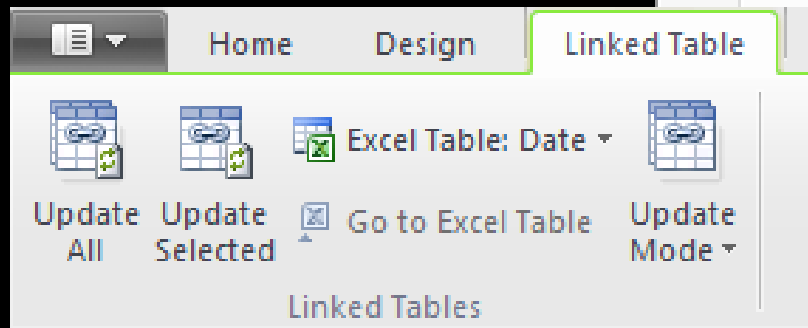
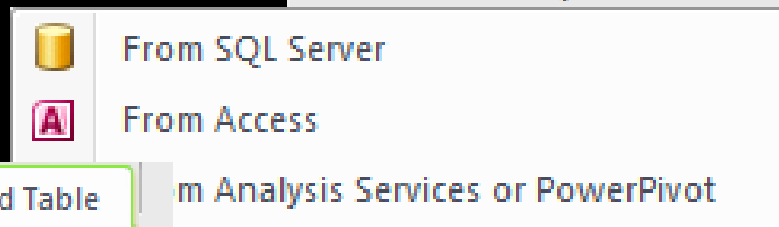
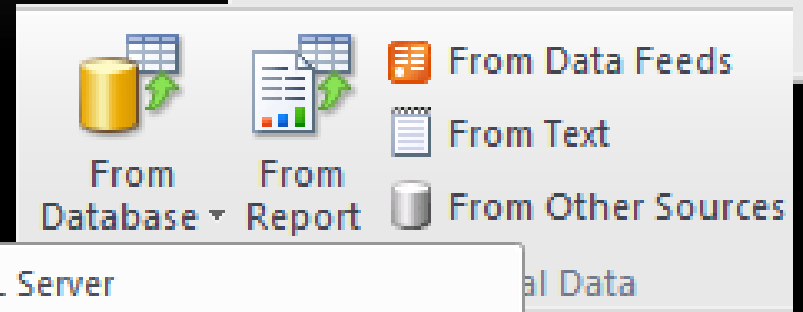
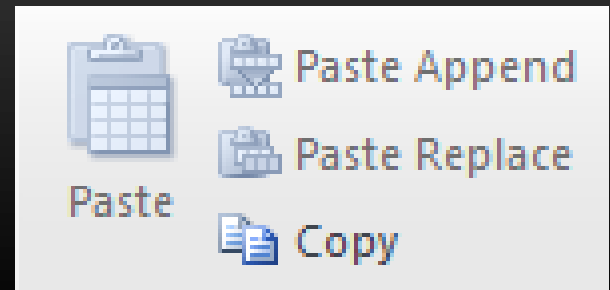
INTRODUCING THE POWERPIVOT WINDOW

- The interface used to load, explore, relate, and enrich data
- Launched from the PowerPivot tab in the Excel ribbon
- Provides wizards and tools to source data from:
 - The clipboard (copy and paste)
 - Databases and data feeds
 - Local Excel workbook tables
- Relationships can be defined to allow filtering of data using related columns and for looking up values in related tables
- When saved, all PowerPivot data and metadata is embedded within the Excel workbook



LOADING DATA

- Copying and Pasting Data
- Loading External Data
- Linking Excel Tables



PREPARING DATA IN POWERPIVOT

- Managing Tables and Columns
- Managing Relationships

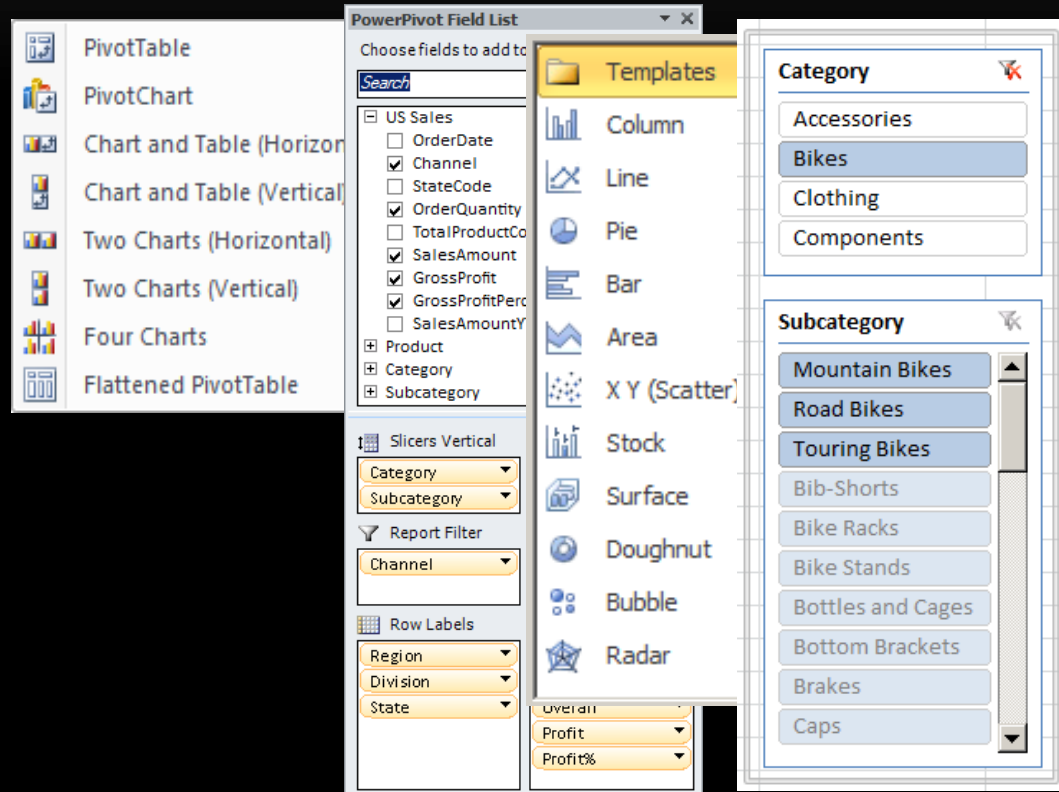
The image shows a screenshot of the Microsoft Excel PowerPivot ribbon and the Manage Relationships dialog box. The ribbon is divided into several groups: Columns, Calculations, Connections, and Relationships. The Manage Relationships dialog box is open, showing a table of relationships between tables in the data model.

Table	Related Lookup Table
US Sales [OrderDate]	Date [Date]
US Sales [ProductKey]	Product [ProductKey]
US Sales [StateCode]	US Geography [StateCode]
US Sales [StateCode2]	US Population [StateCode]
Product [ProductSubcategoryKey]	Subcategory [ProductSubcategoryKey]
Subcategory [ProductCategoryKey]	Category [ProductCategoryKey]

CREATING POWERPIVOT REPORTS

- Reports based on PowerPivot models can be produced with:

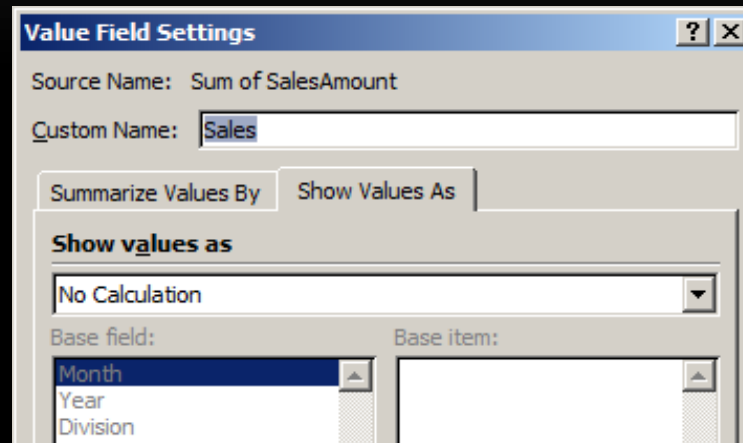
- PivotTables
- PivotCharts
- CUBE functions



FORMATTING REPORTS

- Reports can be further enhanced with native Excel features:

- Conditional formatting
- Slicers
- Charts
- Sparklines



Sales ('000)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Grand Total	Trend
2005							502	1,363	1,121	786	2,139	1,741	7,653	
2006	759	1,724	1,357	896	2,180	1,092	1,771	2,686	2,028	1,362	2,311	1,583	19,749	
2007	1,082	1,862	1,072	1,429	2,261	1,461	1,979	2,634	2,560	1,803	2,298	2,470	22,910	
2008	1,547	2,013	2,036	1,960	2,528	2,581	19						12,686	
Grand Total	3,388	5,599	4,465	4,285	6,968	5,134	4,272	6,683	5,709	3,951	6,748	5,795	62,998	

EXPLORING POWERPIVOT FOR EXCEL



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DEVELOPER OPPORTUNITIES - EXCEL

- Create database views in corporate databases to prepare and facilitate the loading of data
- Develop custom data services to pipe XML data to PowerPivot workbooks via data feeds
- Manage Data Feed Libraries in SharePoint 2010
- Develop PowerPivot models built on top of existing LOB applications
- Develop proof-of-concept applications
- Note:
 - PowerPivot was designed for self-service BI, so there are limited development opportunities in the 2010 release
 - The SQL Server PowerPivot for Excel add-in cannot be enhanced or automated

POWERPIVOT FOR SHAREPOINT ADD-IN

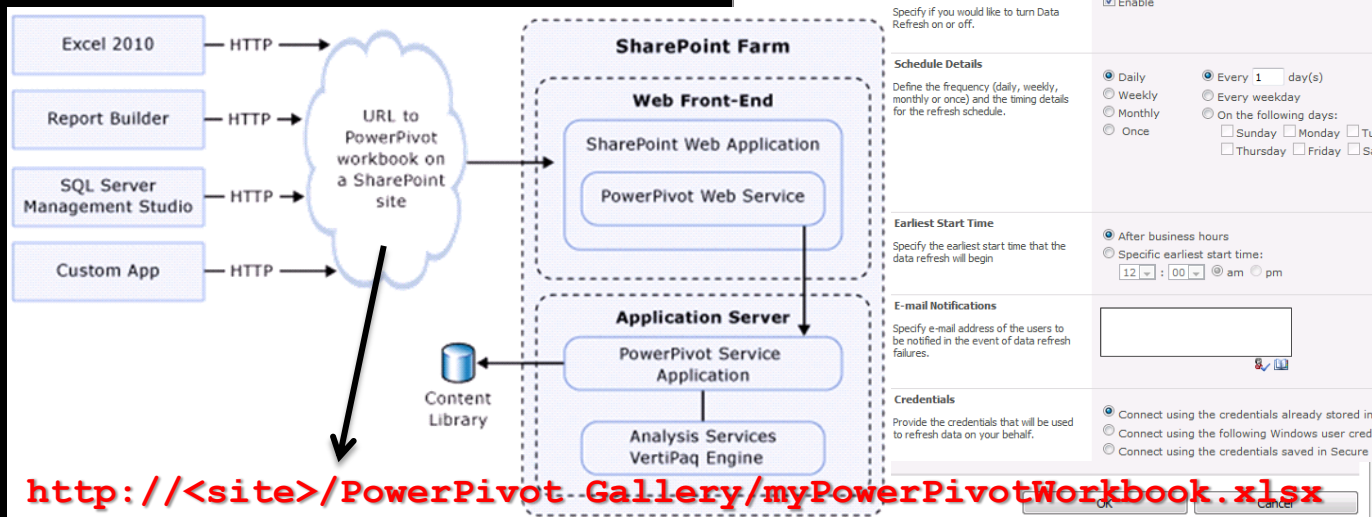
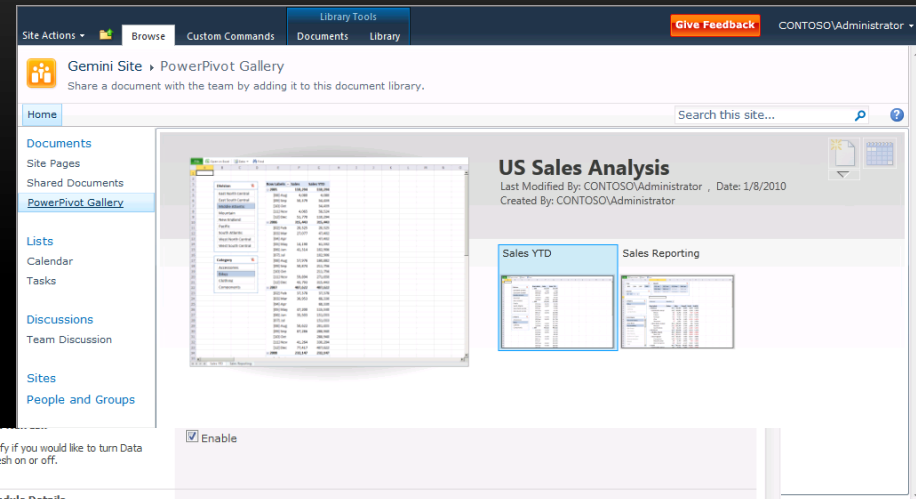
- Provides centralized storage and management of workbooks created by using PowerPivot for Excel
- Uses Excel Services to enable browser access to workbooks
- Processes workbook data in special server-based instance of Analysis Services
- Complements traditional Analysis Services implementations by supporting integration of data sources external to data warehouse
- Includes tools for IT to monitor usage of specific workbooks and impact on server

WHO IS THE POWERPIVOT FOR SHAREPOINT?

- Excel users who
 - Integrate and analyze data using PowerPivot workbooks
 - Need to share results with other users
- SharePoint users who
 - Use team sites and document-management features to store information and collaborate with colleagues
 - Consume and reuse results of analysis stored in PowerPivot workbooks
- Database and IT professionals who
 - Want to delegate business data development tasks to those who need the data most
 - Need to retain sufficient control so that data can be secured, monitored, reproduced, and archived

WORKING WITH POWERPIVOT IN SHAREPOINT

- PowerPivot Gallery
- PowerPivot Data Refresh
- PowerPivot Web Service



EXPLORING POWERPIVOT FOR SHAREPOINT



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DEVELOPER OPPORTUNITIES - SHAREPOINT

- Manage Data Feed Libraries in SharePoint 2010
- Develop applications that consume PowerPivot models using MDX queries
 - Excel
 - Reporting Services
 - Custom applications

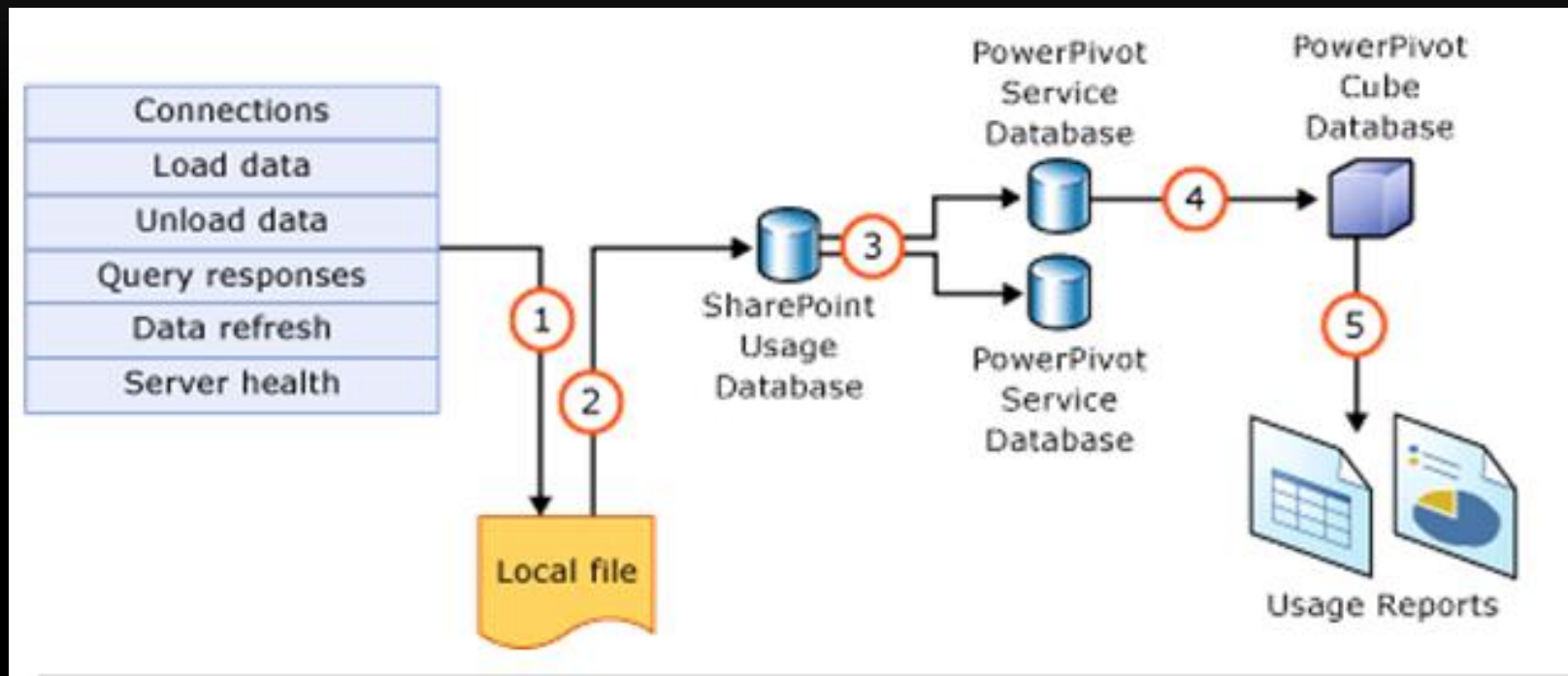
USING THE POWERPIVOT MANAGEMENT DASHBOARD

- PowerPivot Management Dashboard
- PowerPivot Usage Data Collection

POWERPIVOT MANAGEMENT DASHBOARD

- Collection of Web parts and PowerPivot reports that display data related the PowerPivot service application
 - Server health
 - Query response times
 - Workbook usage
 - Data refresh status
- Access to dashboard is limited to service application administrators
- Usage data available in PowerPivot Management Data.xlsx report for customization

POWERPIVOT USAGE DATA COLLECTION



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EXPLORING POWERPIVOT MANAGEMENT DASHBOARD

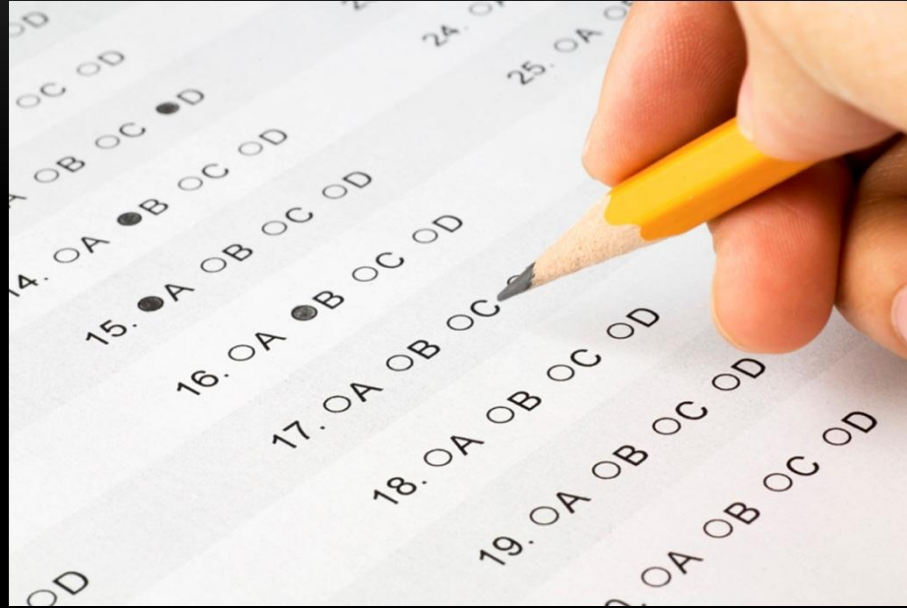


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THANKS..!

- Questions?
- Feedback



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RESOURCES

- Microsoft PowerPivot Website
<http://www.powerpivot.com>
- PowerPivot Product Team Blog
<http://blogs.msdn.com/powerpivot>



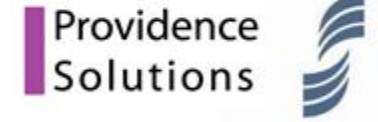
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