



# Delivering Power View with SQL Server 2014 and SharePoint 2013 like it's 2014

Kevin Chant

# Managing expectations

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- ▶ This is a retro session, based on a session I used to present about setting up Power View in 2014.
- ▶ Power BI and Microsoft Fabric will be covered towards the end.



# Past Bio

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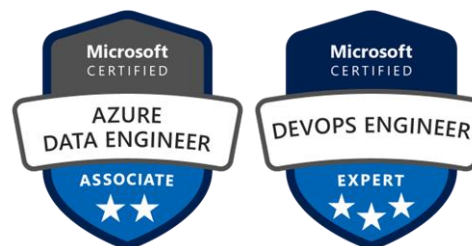
- ▶ Kevin Chant
- ▶ Twitter: @kevchant
- ▶ LinkedIn
  
- ▶ Senior SQL Server DBA at WPA
- ▶ Used SQL 2000,2005,2008,2012, 2014 (CTP2)
- ▶ Various certifications (MCSE, MCITP, MCSA SQL Server 2008 etc)



# Kevin Chant



- Data Engineering Manager in the Netherlands
  - Worked in IT since the days of Windows 95
  - Experience in various sectors
  - Various certifications, Data Platform MVP
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- Twitter/Blue Sky: @kevchant
  - LI: <https://www.linkedin.com/in/kevin-chant/>
  - Blog: <https://www.KevinRChant.com>
  - GitHub: <https://github.com/kevchant>



# Countdown

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2014

# Power View focus

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- ▶ This session will be focusing on using Power View reports in SharePoint 2013 on-site.
- ▶ Using Data Sources Links to SQL Server 2014 Analysis Services Data Sources on Windows Server 2012 R2.
- ▶ Demo



# What is Power View?

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- ▶ Power View is a Data Visualization tool developed by Microsoft as part of their BI suite
- ▶ It allows staff within various levels of the business to visualize the data that's stored
- ▶ Allows report authoring in Excel Spreadsheets or SQL Server Analysis Services databases in a simple format
- ▶ Can create Power View reports in Excel or in SharePoint



# Benefits of using Power View in SharePoint

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- ▶ Allows report authoring directly within a web browser.
- ▶ Self-service reports, removing need for people to have to rely on others to create reports for them
- ▶ Allows them to visualize data that's presented to them how they see fit.
- ▶ Hides complexity of the source data from end users by utilizing user-friendly names in the Field List as part of the BI Semantic Model.





# Additional benefits

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- ▶ Data Collaboration is made easy for the end-user in SharePoint by sharing PowerView reports; allowing users to either create new reports or work with reports previously saved in SharePoint.
- ▶ Allows a central point of administration, so everything can be stored within a site, which can be easily customised to suit organisation needs
- ▶ Site can be easily customised to suit organisation needs
- ▶ Can display thumbnail images of PowerView reports in a PowerPivot Gallery (demo later in session)

# Uses for PowerView reports in SharePoint includes

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- ▶ Empowering users to visualize data that exists in SQL Server Analysis Services databases (such as established Multi-Dimensional cubes)
- ▶ Creating Key Performance Indicators (KPIs) for the business
- ▶ Utilizing hierarchies created in Analysis Services to create drill-through reports (E.g. Region, Country, City)



# Additional uses for PowerView reports in SharePoint

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- ▶ Create standard report templates which you can alter and save elsewhere on the SharePoint site.
- ▶ Can export reports into PowerPoint slides, which can be either:
  - ▶ Static
  - ▶ Interactive (demo later in session)



# Internet Sales order example



# Installation requirements to setup Power View in SharePoint

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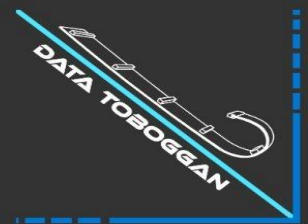
- ▶ SharePoint 2010 or 2013 Enterprise Edition (not Preview Edition) on a server in an Active Directory Domain...
- ▶ SQL Server Database Engine instance installed; ideally accompanied with an Analysis Services instance installed to get the maximum benefits (either SQL Server Enterprise or Business Intelligence Edition)
  - ▶ Tabular BISM requires SQL Server 2012 and above
  - ▶ Multi-Dimensional SSAS databases requires SQL Server Analysis Services 2012 SP1 with CU 4 or above.



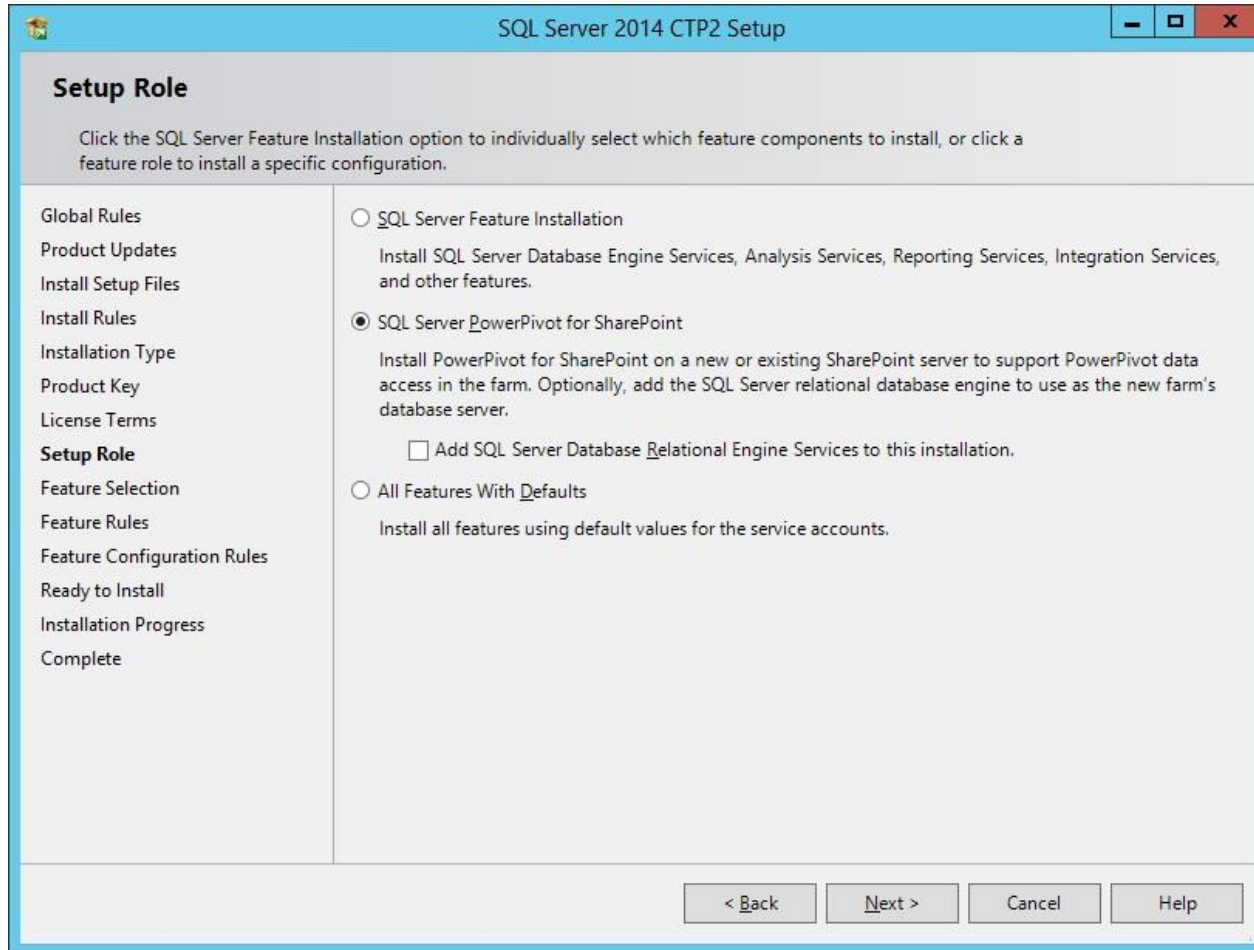
# Additional requirements

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- ▶ SQL Server PowerPivot for SharePoint (option to install is available in SQL Server setup wizard)
- ▶ Reporting Services for SharePoint
- ▶ Reporting Services Add-In for SharePoint Products
- ▶ Note: Last two options can be selected during SQL Server setup



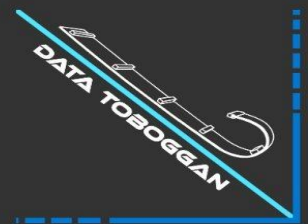
# SQL Server PowerPivot for SharePoint Role in setup wizard



# Demo Server setup

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- ▶ Setup on single server





# Recommended installation path on one server

- ▶ SharePoint 2013 Prerequisites, link available during SharePoint install process.
  - ▶ For it to work smoothly on Windows Server 2012 R2 an internet connection is required.
  - ▶ However, there are workarounds. Which you must use if installing a version of SharePoint on Windows Server 2012 R2 prior to SP1.
- ▶ SharePoint 2013
  - ▶ Do not perform stand-alone install
  - ▶ Preferably, do not select to run the “SharePoint Products Configuration Wizard” at end of the installation
  - ▶ Note: SharePoint 2013 installations which are not SP1 or above are NOT supported on Windows Server 2012 R2.

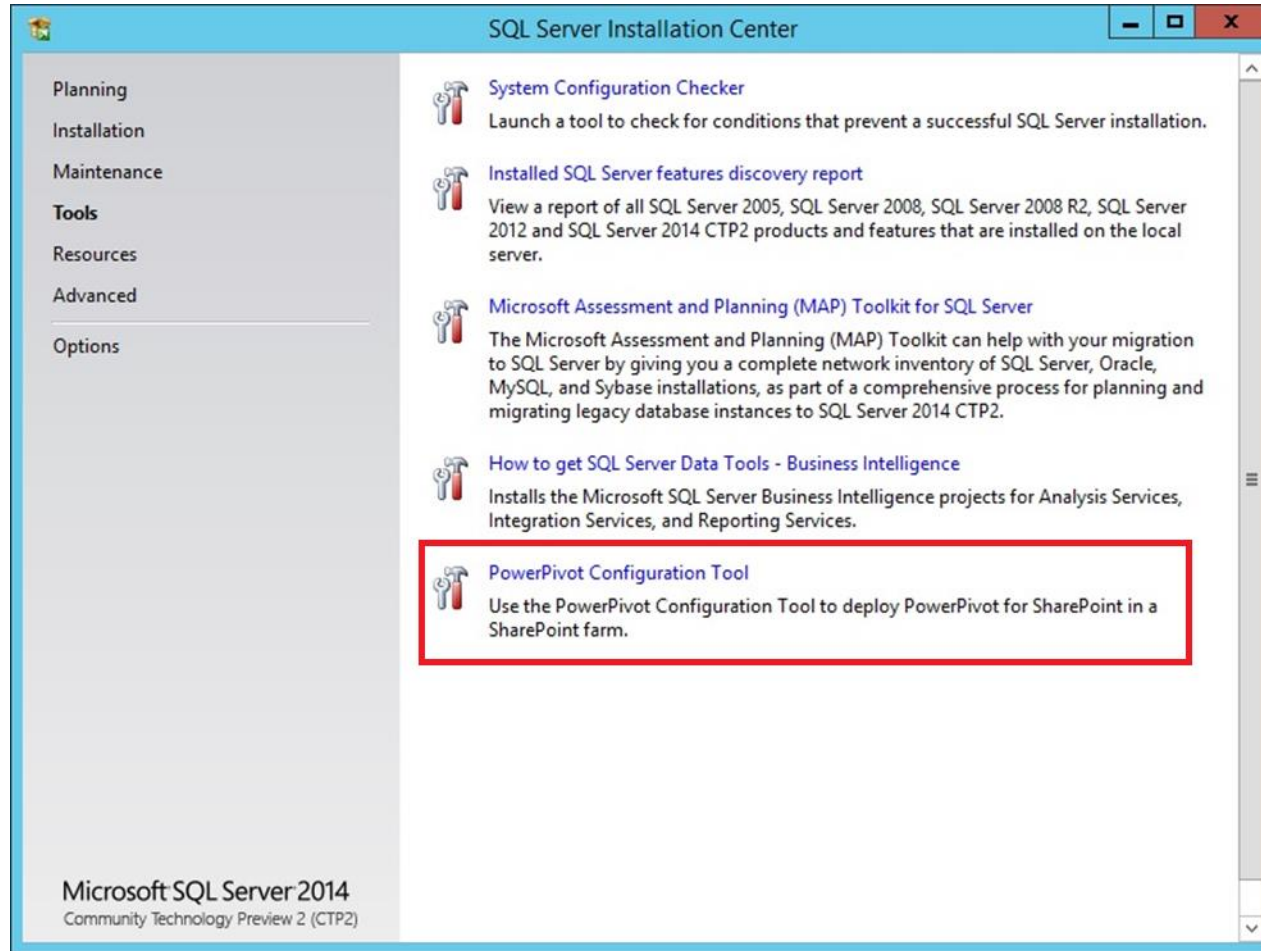
# SQL Server installations on single server

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- ▶ SQL Server Database Engine
- ▶ Preferably at least one Analysis Services instance (either Tabular or Multi-Dimensional model, SQL Server 2014 supports Power View reports with both)
- ▶ SQL Server PowerPivot for SharePoint Role (which is part of the SQL Server 2014 install set)
  - ▶ Performing after installing the Database Engine allows more flexibility in your configuration.
  - ▶ Can configure using either the “PowerPivot Configuration Tool”, which is part of the SQL Server 2014 installation centre (screenshot shortly); or with PowerShell

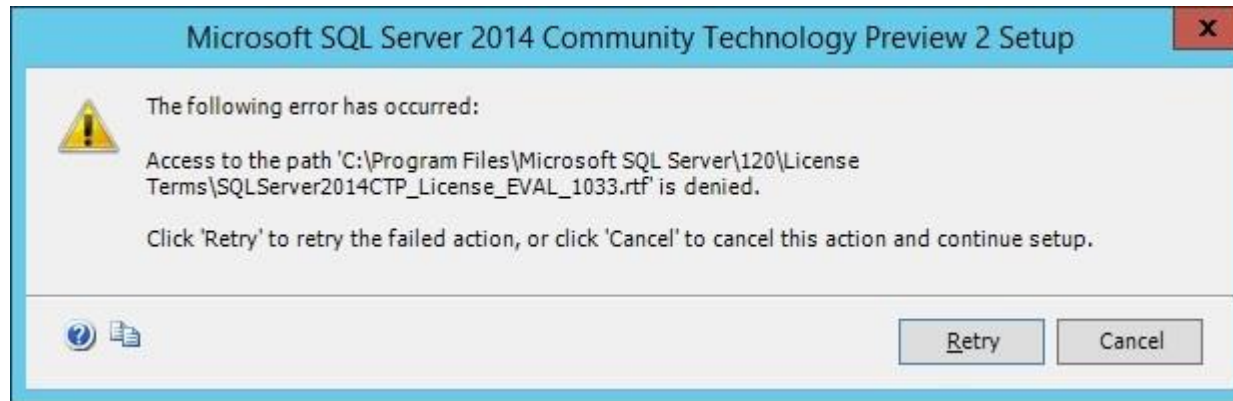


# PowerPivot Configuration Tool in SQL Server Installation Centre



# SQL Server 2014 CTP 2 Error

- ▶ During the installation of multiple SQL Server 2014 CTP2 instances you might get the following error:

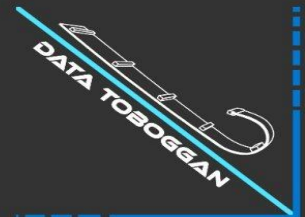


- ▶ To resolve, find the file specified and stop it from being Read-only and then click Retry

# Reporting services for Sharepoint

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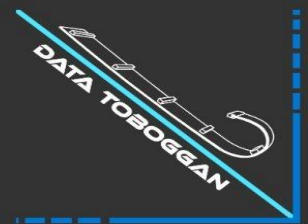
- ▶ If you intend to deploy Power View with SharePoint across a farm with multiple servers then I highly recommend scripting it all using PowerShell.
- ▶ Install the “Reporting Services -SharePoint” and the “Reporting Services Add-in for SharePoint Products” features onto your initial SQL instance.
- ▶ Ensures that everything will work smoothly.
- ▶ Can then fine tune your environment by using either:
  - ▶ SharePoint 2013 Central Administration tool
  - ▶ PowerShell
- ▶ Afterwards, create a SQL Server Reporting Services Application in SharePoint for use and a new site for PowerView.



# SharePoint farm advice

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- ▶ If you intend to deploy Power View with SharePoint across a farm with multiple servers then I highly recommend scripting it all using PowerShell.



# To work with Power View reports in a browser

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- ▶ A supported browser for Power View, with the Silverlight add-in installed for that specific browser
  - ▶ Interesting side note: HTML5 is currently being piloted for viewing Power View reports, which potentially means the Silverlight dependency will cease.
  - ▶ Hopefully, this will allow more flexible browser support. Unless intended for use with something new.

# List of supported browsers (from SQL Server 2014 Books Online)

| Browser  | Windows 8 and 8.1 | Windows 7      | Windows Server 2012 and 2012 R2 | Windows Server 2008 R2 | Windows Server 2008 | Mac OS X 10.6 - 10.9 |
|--|-------------------|----------------|---------------------------------|------------------------|---------------------|----------------------|
| Internet Explorer 11 (for the desktop)             | 32-bit, 64-bit    | 32-bit, 64-bit | 32-bit, 64-bit                  | 32-bit, 64-bit         | Not supported       | Not supported        |
| Internet Explorer 10 (for the desktop)             | 32-bit, 64-bit    | 32-bit, 64-bit | 32-bit, 64-bit                  | 32-bit, 64-bit         | Not supported       | Not supported        |
| Internet Explorer 9                                | Not supported     | 32-bit, 64-bit | Not supported                   | 32-bit, 64-bit         | 32-bit, 64-bit      | Not supported        |
| Internet Explorer 8                                | Not supported     | 32-bit, 64-bit | Not supported                   | 32-bit, 64-bit         | 32-bit, 64-bit      | Not supported        |
| Mozilla Firefox (latest publicly released version) | 32-bit            | 32-bit         | 32-bit                          | 32-bit                 | 32-bit              | Not supported        |
| Apple Safari (latest publicly released version)    | Not supported     | Not supported  | Not supported                   | Not supported          | Not supported       | 32-bit, 64-bit       |





# Potential workarounds if not using a supported browser

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- ▶ Can use a Remote Desktop Connection to connect up to a server that has a supported browser installed.
- ▶ Alternatively, publish the browser as a published app for Web Access using a platform like Citrix.
- ▶ On that note, there is now a Microsoft Remote Desktop App for I pads.
- ▶ If using a mobile device off-site potentially you can reverse proxy back to the server that has a supported browser installed



# Creating Power View Reports

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- ▶ Once your site is up and running, you can create Data Source Connection links to create PowerView Reports using one of two methods which are
  - ▶ Report Data Sources
  - ▶ BI Semantic Model Connections



# Report Data Sources

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- ▶ More generalized way to create Data Sources for your Power View Reports
- ▶ Can be used to create Sources for either Tabular or Multi-Dimensional Analysis Services databases
- ▶ One proviso for the Multi-Dimensional database is that the compatibility level is correct
- ▶ Report Data Sources can be shared with other applications such as SSRS



# Warning

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- ▶ After creating a Report Data Source and you move it elsewhere in SharePoint using Windows Explorer you might need to edit the datasource to re-enter any Stored Credentials.
- ▶ May need to select “Enable this data source” at the bottom of the screen



# SSAS Perspectives

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- ▶ When configuring a Report Data Source for a SQL Server Analysis Services database you can specify a Perspective name as well
  - ▶ A perspective is a filtered view of a cube/model, similar to Views in a Database Engine.
- ▶ Enter the Perspective name in the string instead of a cube name



# BI Semantic Model Connections

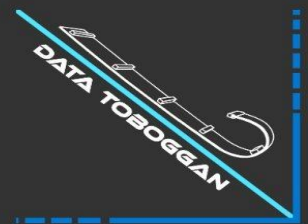
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- ▶ BI Semantic Model Connections are used to connect to Tabular sources
- ▶ Source can be either an Excel workbook with PowerPivot tables or a Tabular instance of SQL Server Analysis Services database
- ▶ Connections can also be a source for Excel Spreadsheets and other applications that can utilise BI Semantic Models

# Demos

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- ▶ Report Data sources
- ▶ BI Semantic Model Connections
- ▶ Excel sources



# Considerations about Analysis Services databases

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- ▶ If using SSAS Tabular Models (BISM) as the Data Source, you can use them “as is”.
- ▶ Multi-Dimensional databases created using SQL Server 2012 SP1 CU 4 or above is fine. If using a Multi-Dimensional database from a previous version you need need to change the compatibility level of the database.





# Two methods to create a Power View report

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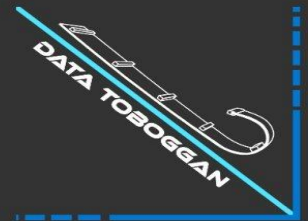
- ▶ Click directly a Report Data Source.
- ▶ Alternatively, click on the ellipses next to the Data Source name (...), then click on ellipses next to follow (...) and then select “Create Power View Report”



# Power View Report Demos

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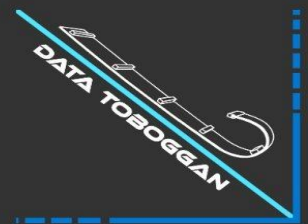
- ▶ Layout demo
- ▶ Field list
  - ▶ Differences between Multi-Dimensional and Tabular fields



# Populating a report

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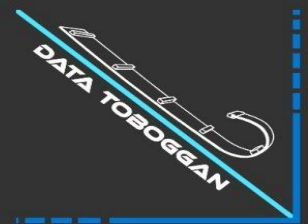
- ▶ Can either select fields or drag them onto the blank canvas
- ▶ Once you have got use to the formatting and options available you can create simple reports with ease
- ▶ Drill through demo



# Demos

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- ▶ Drill through report
- ▶ Examples in PowerPivot Gallery



# Links

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- ▶ SQL Server 2014 CTP2 Data Tool:  
<http://www.microsoft.com/en-gb/download/details.aspx?id=40736>
- ▶ Create a PowerView report with a MultiDimensional Data Source <http://msdn.microsoft.com/en-us/library/dn198311.aspx>
- ▶ Power View Browser Support for SQL Server 2014  
[http://msdn.microsoft.com/en-us/library/ms156511\(v=sql.120\).aspx](http://msdn.microsoft.com/en-us/library/ms156511(v=sql.120).aspx)
- ▶ Upgrading the compatibility level of an SSAS database  
[http://msdn.microsoft.com/en-us/library/gg471593\(v=sql.120\).aspx](http://msdn.microsoft.com/en-us/library/gg471593(v=sql.120).aspx)
- ▶ Site slowness because of SharePoint STS Certificate CRL checking <http://support.microsoft.com/kb/2625048>



# Book recommendation

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- ▶ Vizualizing Data with Microsoft Powerview:  
[http://www.amazon.co.uk/Visualizing-Data-Microsoft-Power-View-ebook/dp/B0089LQAJC/ref=sr\\_1\\_1?ie=UTF8&qid=1395011396&sr=8-1&keywords=powerview](http://www.amazon.co.uk/Visualizing-Data-Microsoft-Power-View-ebook/dp/B0089LQAJC/ref=sr_1_1?ie=UTF8&qid=1395011396&sr=8-1&keywords=powerview)



# Back to 2024

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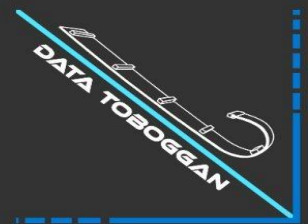
2014



Power BI

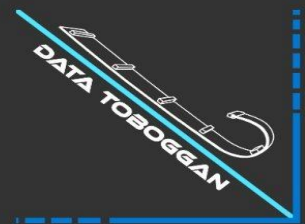


Microsoft Fabric



# Questions?

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# Thank you

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- Twitter/Blue Sky: @kevchant
- LI: <https://www.linkedin.com/in/kevin-chant/>
- Blog: <https://www.KevinRChant.com>
- GitHub: <https://github.com/kevchant>