

# SQLintersection

Thursday November 2, 2017  
10:00am - 11:15am

## SQL SERVER 2016/2017: ENTERPRISE AND MOBILE REPORTING

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SQL  
*intersection*



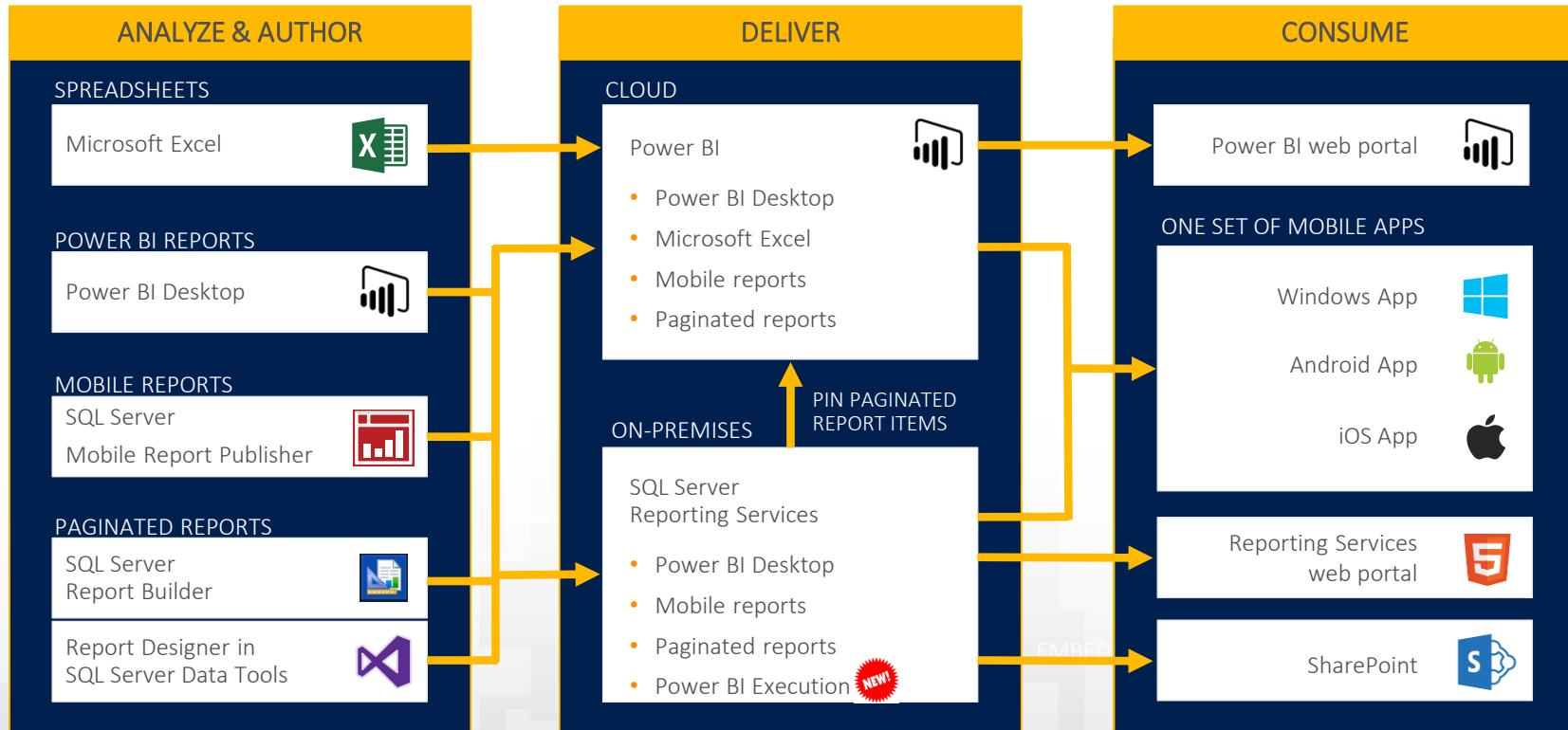
# Overview

## ■ Introduction

- Microsoft Reporting Ecosystem Overview
- What's New in SQL Server 2016 / 2017 Reporting Services
- SSRS Features and Capabilities
- Microsoft SQL Server Mobile Report Publisher
- Power BI Report Server 

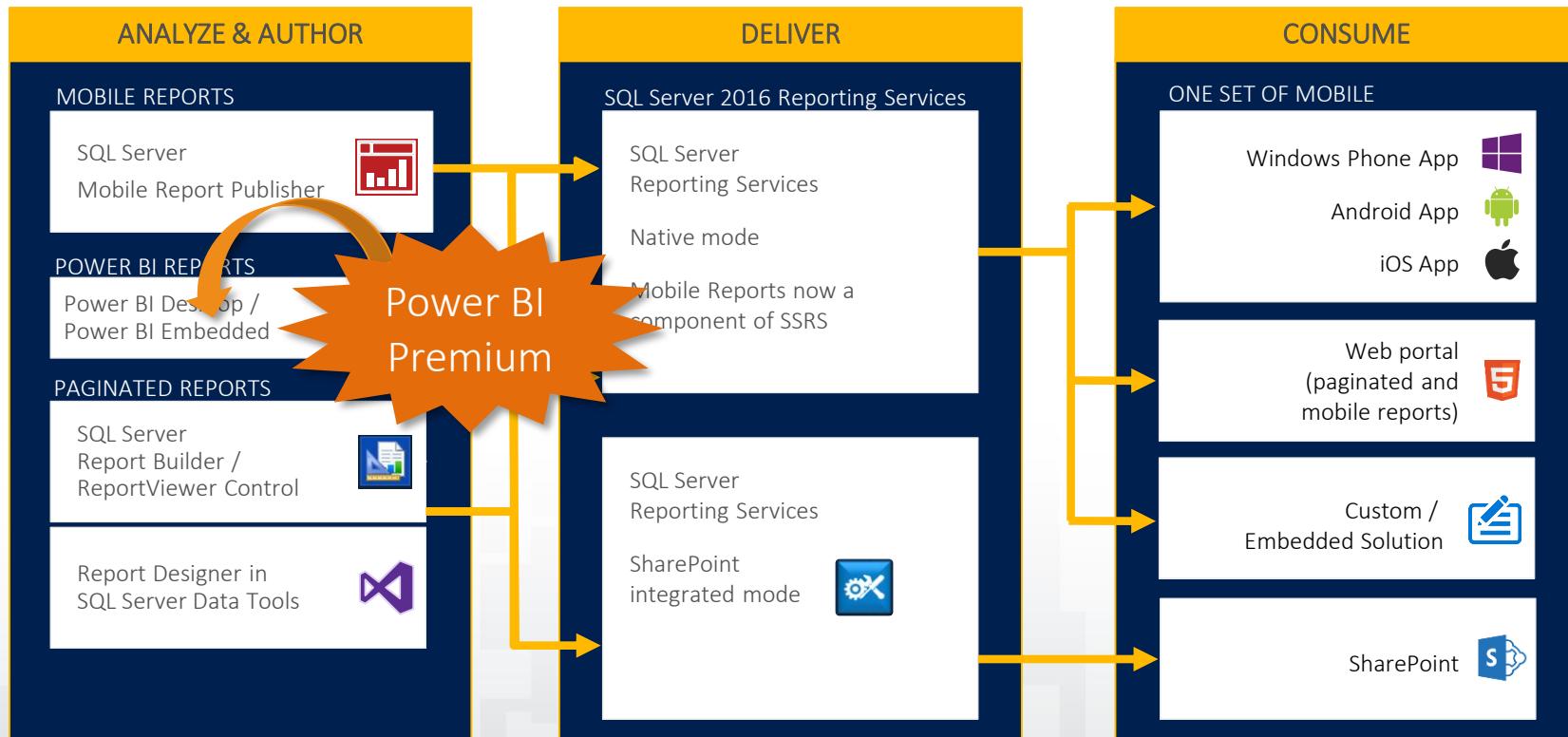
# Hybrid SQL Server BI and Power BI

## SQL Server 2016 / 2017 and Beyond



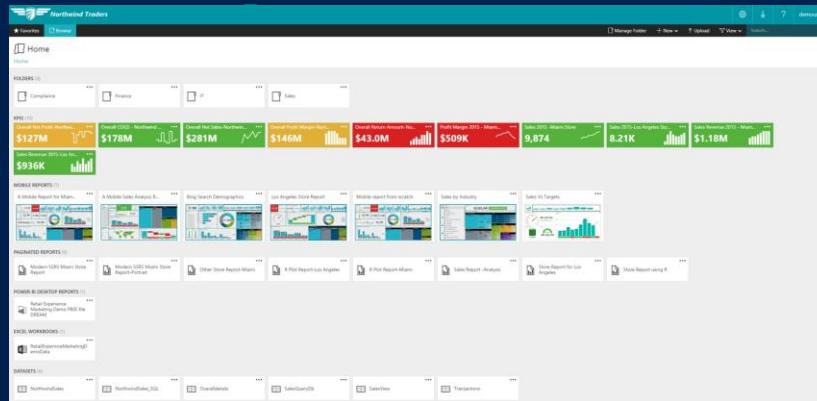
# SQL Server 2016 Business Intelligence

## Roadmap for SQL Server Reporting Services & Mobile Reporting



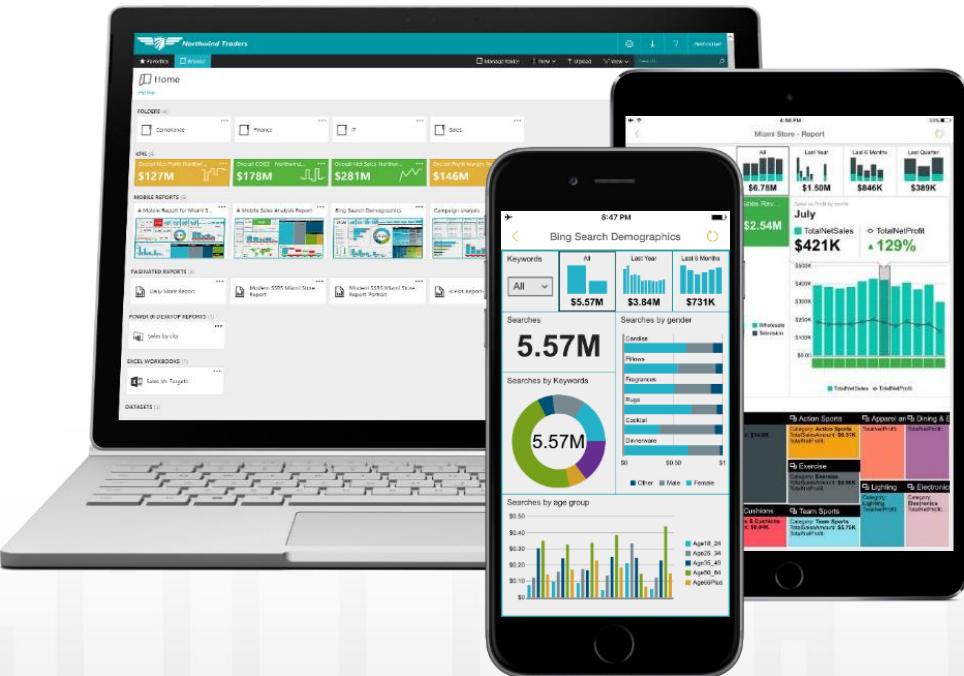
# SQL Server 2016 / 2017 Reporting Services

## Features and Capabilities



# SQL Server Reporting Services

## On-premises solution for deploying and managing reports



### Paginated Reports

Design beautiful documents using updated tools and new features

### Mobile Reports

Create responsive, interactive reports optimized for mobile devices

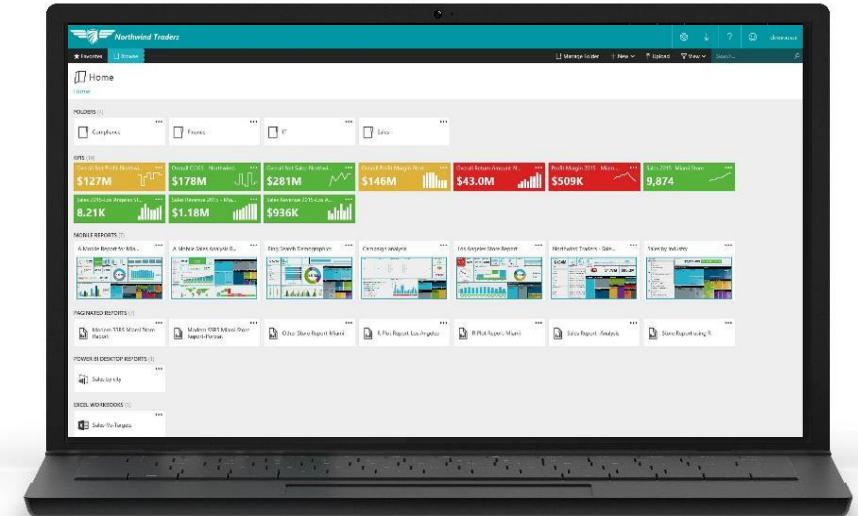
### New Web Portal

Consume both types of reports in one web portal using modern browsers

Dramatically simplified options for key Report Administration tasks  
(Example: Cached Reports)

# New, modern web portal for reports

## Consume paginated and mobile reports in one place



Access KPIs and both types of reports in one web portal

Designed for modern browsers

Built on HTML5 technology

Reflect your organization's brand

Embed reports in other apps

- Power BI Embedded (Premium)
- Reporting Services url access
- SSRS ReportViewer Control
- Mobile Reporting

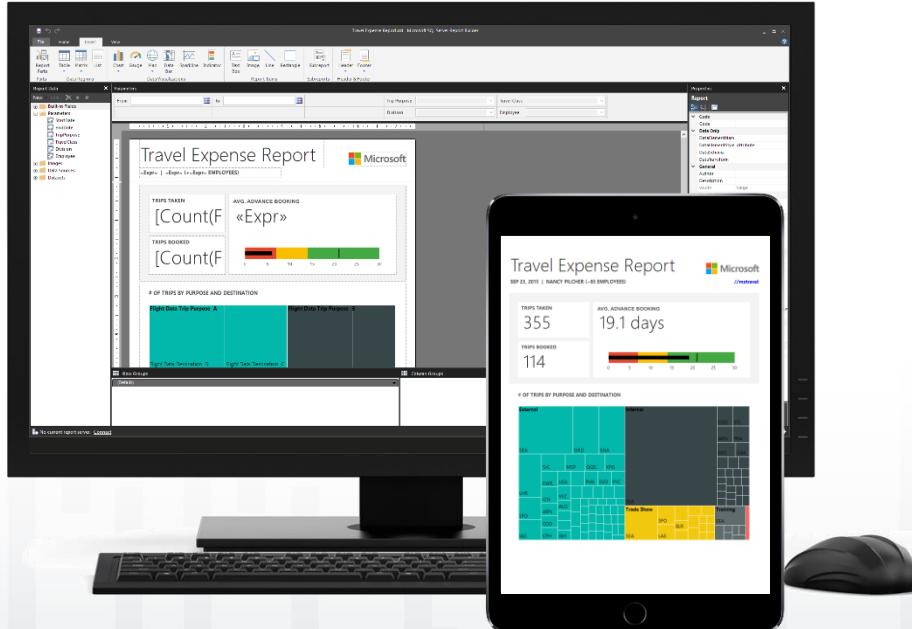
# Creating a Branding Package

- SQL Server 2016 Reporting Service Portal can be completely customized
- Below are the three files used in the branding package:
  - Metadata.XML
  - <Colors>.JSON
  - Logo File
- Methods:
  - Leverage the Visual Studio Image Editor
  - The Codeplex SSRS Branding File Editor
    - <http://ssrsbrandingfileeditor.codeplex.com>
      - <http://html-color-codes.info/colors-from-image/>
      - <http://www.pictaculous.com/>



# Modern Paginated Reports

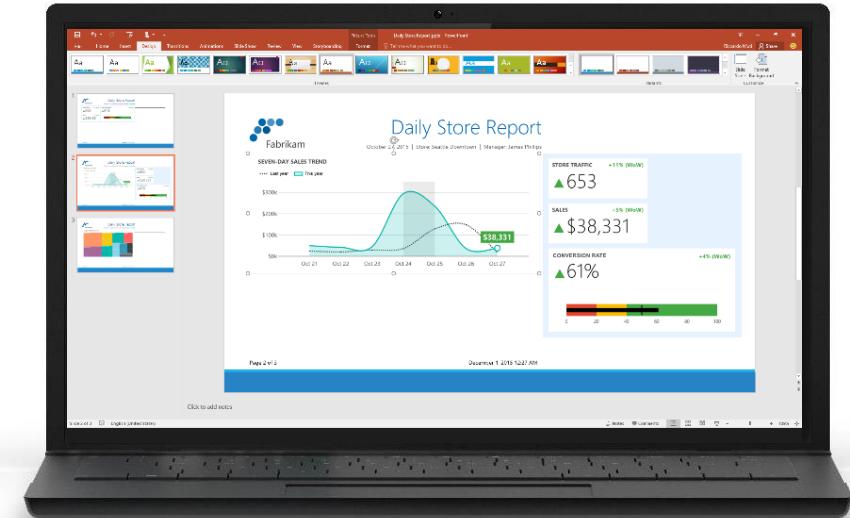
## Design Beautiful Documents Quickly and Easily



- Precisely formatted operational reports
- Optimized for document generation and printing
- Page headers, footers, and page breaks
- Modern chart and gauge styles
- Visual Studio 2015+ support
- Plugin-free printing

# Export to PowerPoint

## Generate Presentations from Paginated Reports



Generate slides including all report content in seconds

Move and resize individual objects

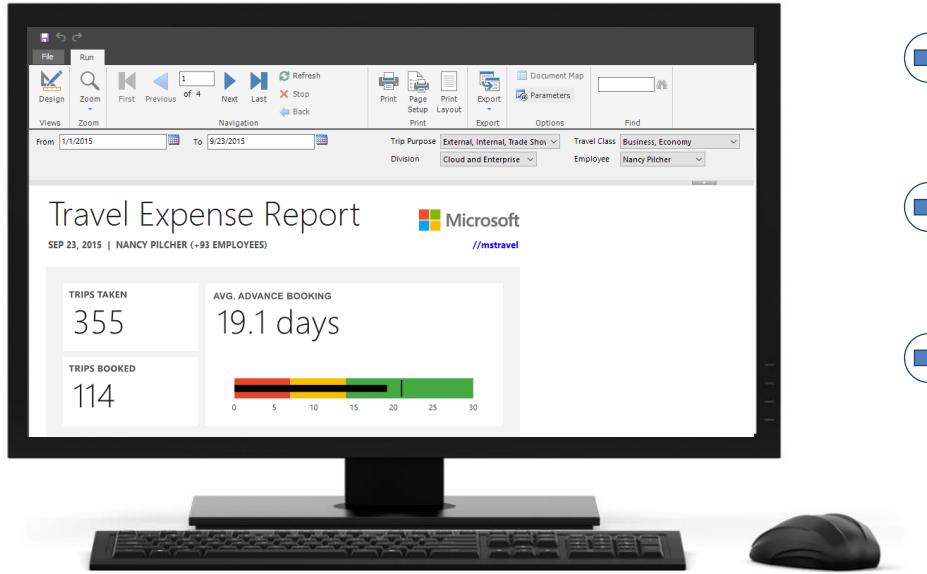
Export manually, schedule for email delivery, or generate programmatically

Leverage 'Power BI Tiles' to connect to Power BI services

Leverage 'Web Apps' for SSRS / Mobile

# Customizable Parameter Layout

## Position Report Parameters the way you want



- ➡ Position parameters across more than two columns
- ➡ Choose the position of each parameter
- ➡ Create space between groups of parameters

# Pin Report Items to Power BI Dashboards

Get more from Existing Reporting Services Investments



Monitor the most important metrics and trends in one place

Pin charts, gauges, maps, and images as tiles to Power BI dashboards

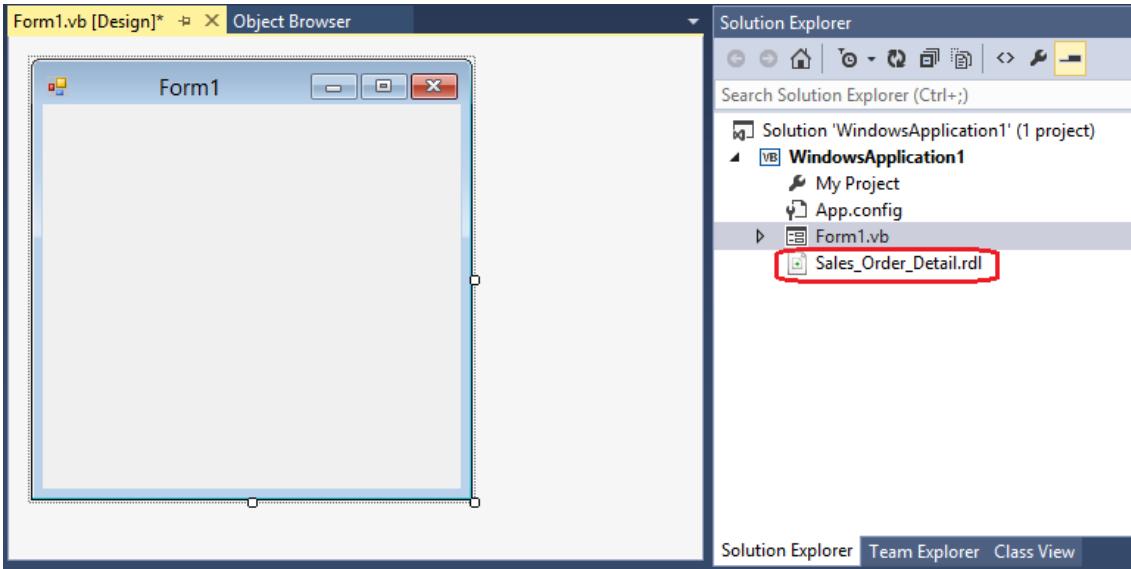
Drill through to source reports

Refresh tiles on a schedule



Pin to a dashboard in a Power BI Group

# SQL Server 2016+ ReportViewer Control



- WinForms ReportViewer Control
- WebForms ReportViewer Control  
<https://www.nuget.org/packages/Microsoft.Report.Viewer>
- Other options include URL access in a Web App or Windows App  
<https://msdn.microsoft.com/en-us/library/ms154537.aspx>



# Reporting Services Web Portal – Walkthrough

**Power BI Integration**

**Export to PowerPoint**

**PowerPoint - Power BI Tiles**

**SSRS Branding**

# SQL Server 2016 / 2017 Mobile Report Publisher

Features and Capabilities



# Create Interactive Mobile Reports

## Responsive Experiences for Phones and Tablets



Drag-and-drop to create beautiful, interactive data visualizations

Prototype in minutes with simulated data

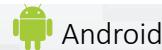
Access enterprise data sources by connecting to Reporting Services

Customize layouts for different form factors

Create enhanced KPIs

# Consume Mobile Reports

## Native apps for all Major Mobile Platforms



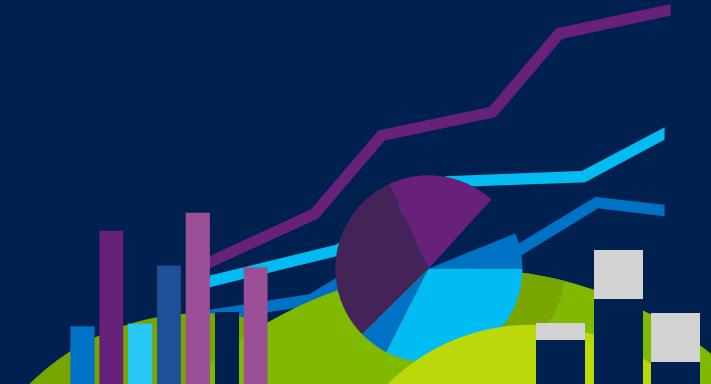
- ➡ One mobile app for Power BI and SSRS mobile reports
- ➡ Native mobile experience optimized for touch
- ➡ Keep data up-to-date with real-time query or scheduled data refresh
- ➡ Interact with mobile reports even when disconnected

# Mobile Report Publisher – Walkthrough

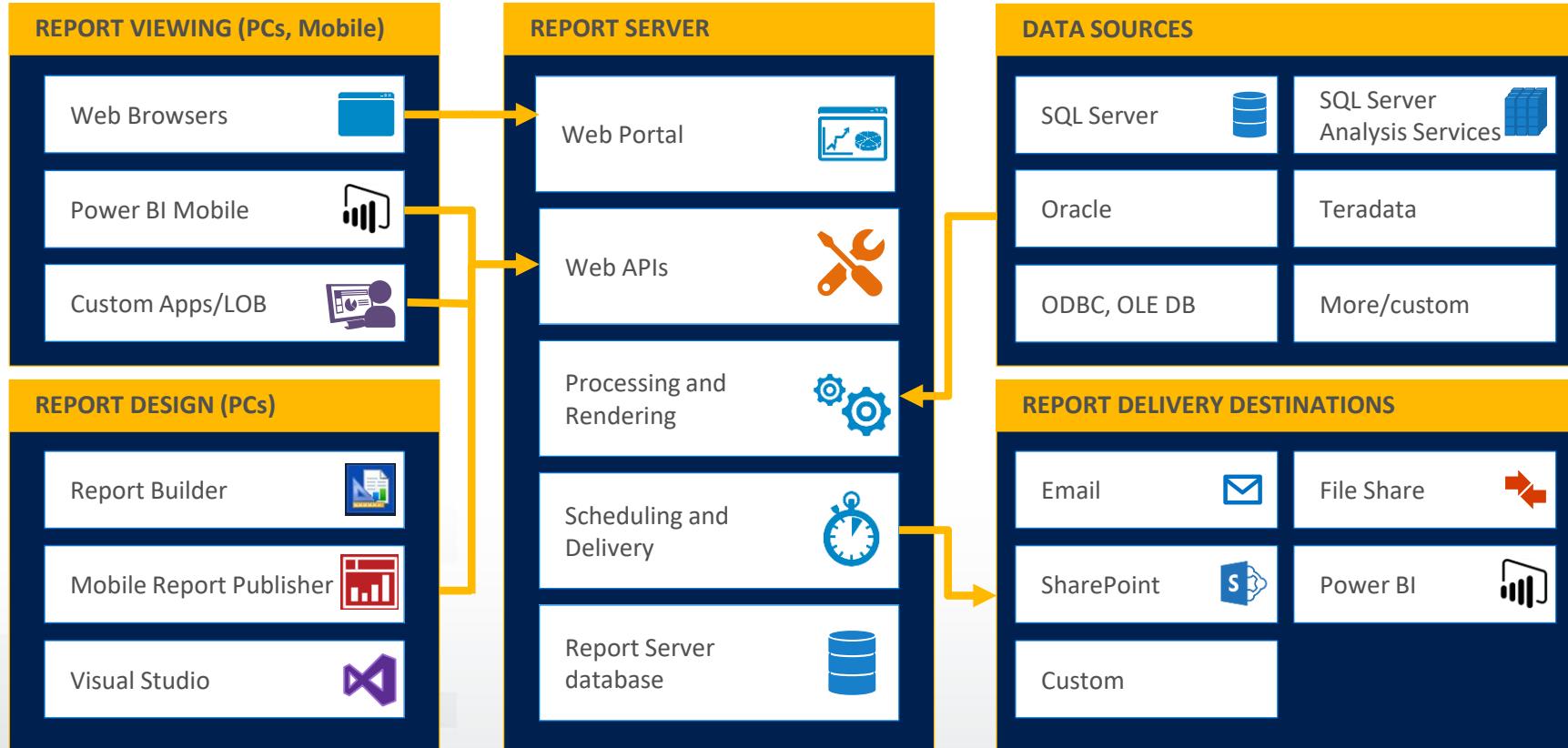
**Developing with Mobile Report Publisher  
Publishing to Reporting Services  
KPIs and Mobile Reporting**

# SQL Server 2016 / 2017 Reporting Services

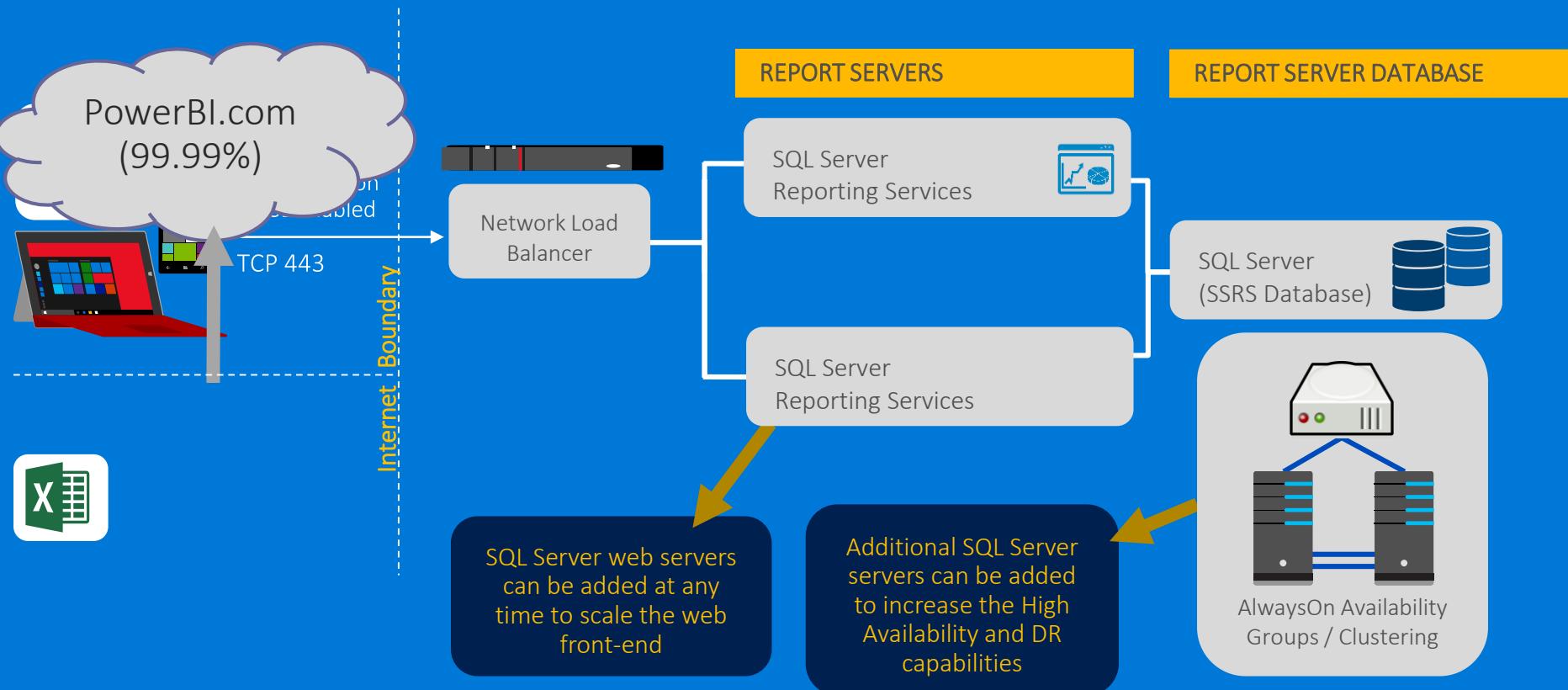
Availability and Scale Out



# Reporting Services Architecture



# SQL Server Reporting Services HADR

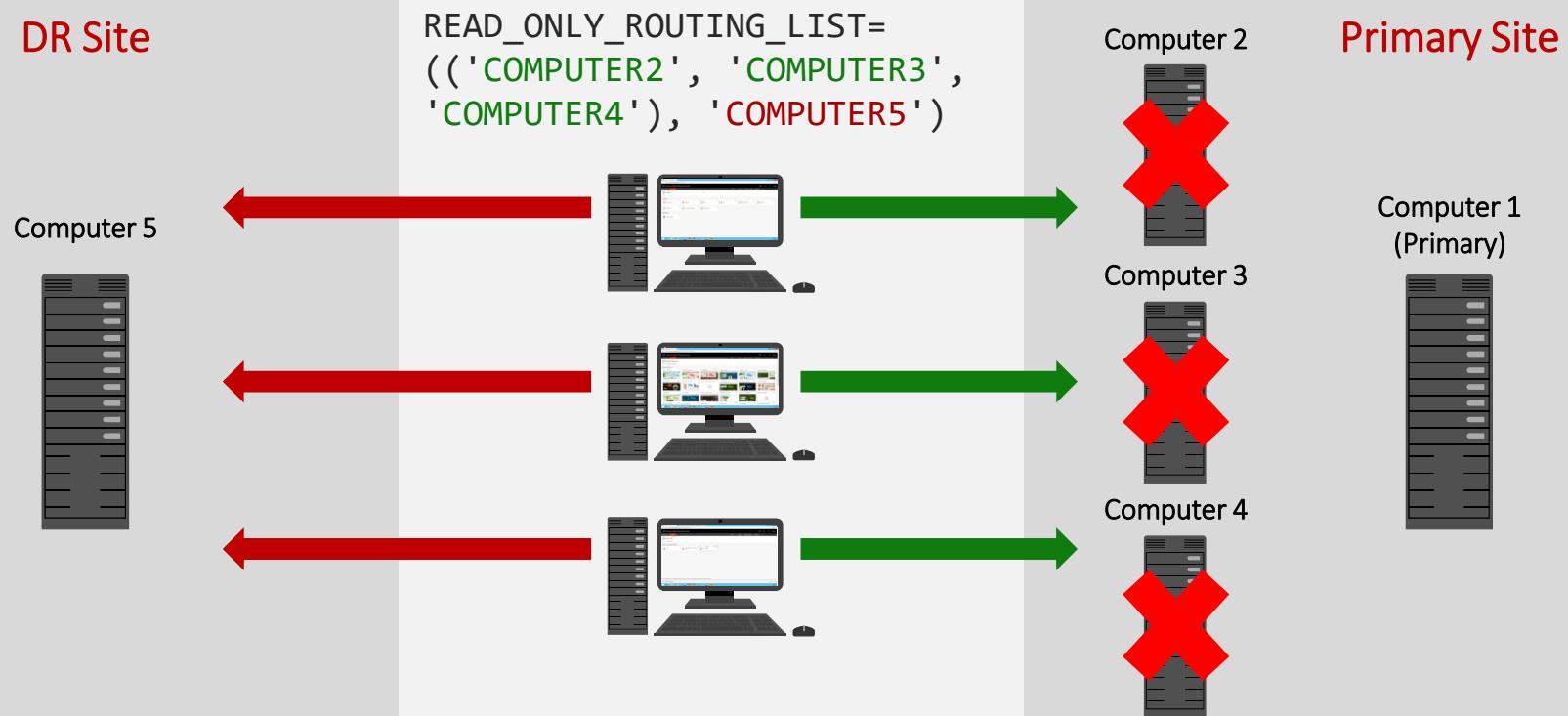


## Load Balancing in Readable Secondaries

- In SQL 2014, read-only transactions routed by the Listener, went to the first secondary that was available
- Read-only Routing lists
- Now you can configure the ROR lists to round-robin among a specific set of secondaries. (for each primary)

```
READ_ONLY_ROUTING_LIST =  
(( 'COMPUTER2' , 'COMPUTER3' , 'COMPUTER4' ), 'COMPUTER5' )
```

# Readable Secondary Load Balancing

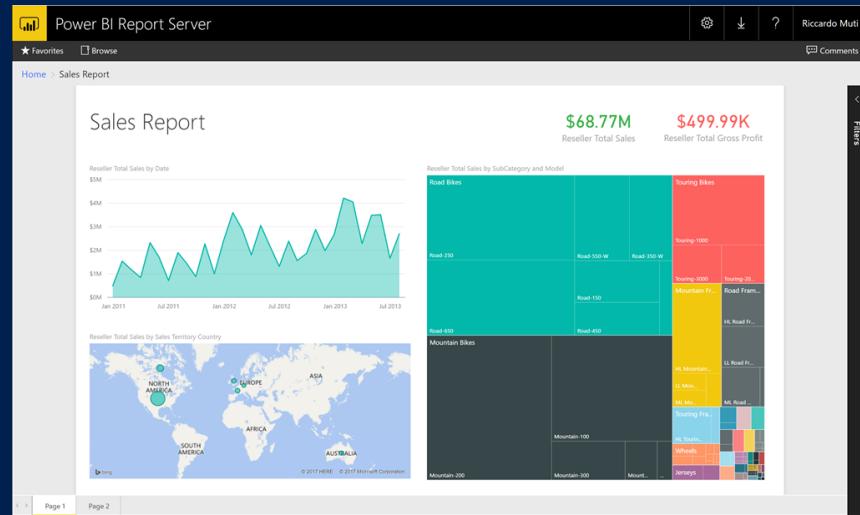


# What's New in SQL Server 2017 (GA)

- SSRS is no longer available through SQL Server setup.
  - <https://blogs.msdn.microsoft.com/sqlrsteamblog/2017/10/02/sql-server-2017-reporting-services-now-generally-available/>
- Comments are now available for reports and attachments
- Report Builder and SQL Server Data Tools
  - You can create native DAX queries against supported SSAS tabular data models by dragging and dropping desired fields in the query designers

# Power BI Report Server

Power BI  
On-Prem Solutions

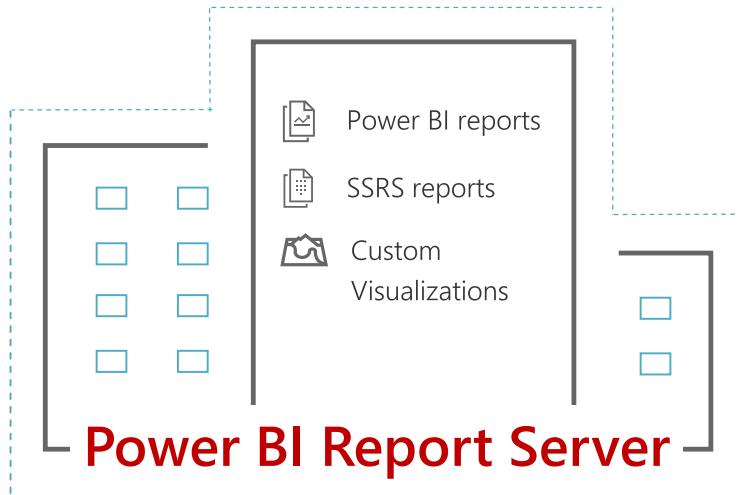


# Power BI: Extending On-Premises Capabilities



# Power BI Report Server

**Self-service BI and Enterprise Reporting in one Solution**



Keep Power BI reports On-Premises



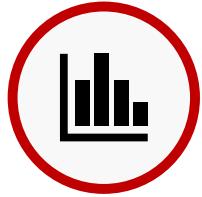
Compatible with SSRS



Move to the Cloud on your Terms

# Keep Power BI reports on-premises

## Fully Interactive Reports to Visualize Your Data and Gain Insights



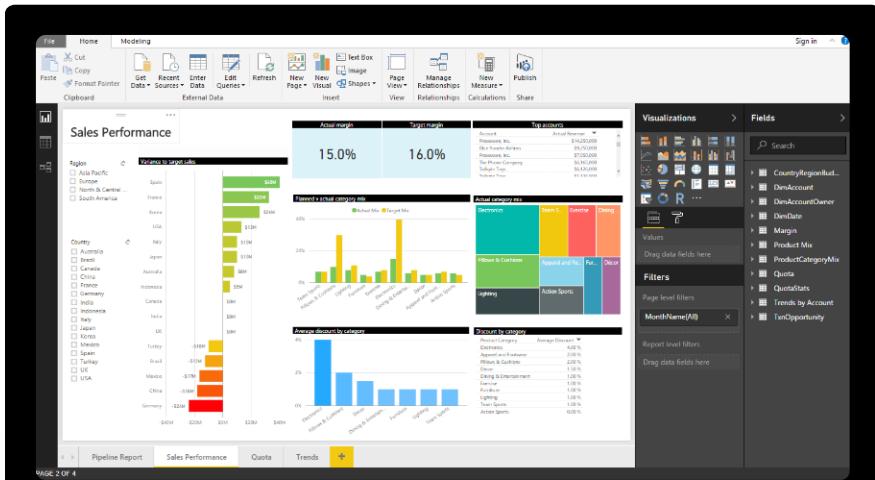
Explore data across multiple visualizations

Drill through to underlying reports

Apply filters at a visual, page, or report level

# Create Compelling Interactive Reports

## Using Power BI Desktop



Connect to Analysis Services models  
(Tabular or Multidimensional)

**Note:** Additional data sources coming soon

Explore and visualize your data on a free form canvas with a variety of built-in and **custom visuals**

Publish to Power BI Report Server

Update reports and republish

# Compatible with SSRS

## Built on Proven SQL Server Reporting Services Technology



### [Publish SSRS reports](#)

Create and publish precisely-formatted, paginated, modern reports

### [Consume in Multiple ways](#)

Modern browsers, mobile app or embed into apps

### [Benefit from an Enterprise-ready Solution](#)

Manage permissions, enable security, set up alerts, and access reports in one modern web portal

# Consume in Multiple ways to Meet Business Needs

## Mobile Apps

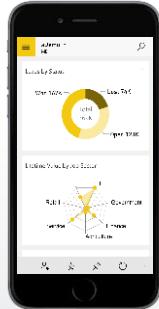
Windows Phone App



Android App

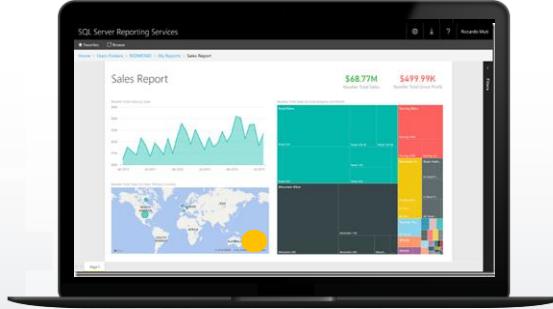


iOS App



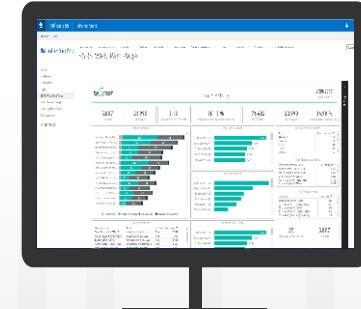
## Web Portal

Consume with ease via Power BI Report Server web portal



## Embedded In Your Apps

Easy to embed into apps



# Embed in an Application

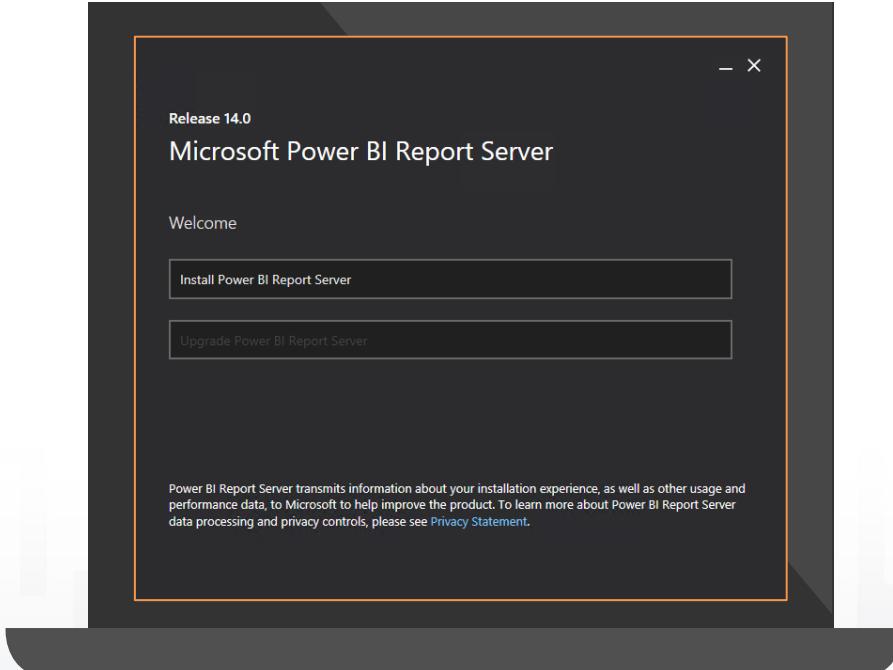
The screenshot shows a SharePoint page with a navigation bar at the top. Below the navigation, there's a header for 'SSRS Web Part Page'. The main content area contains a 'tyGraph' report. Key sections include:

- Group Activity:** Includes metrics like 5,807 Threads, 23,990 Messages, 3.13 Responses per Thread, 30.13 % Responded not (monitored) (%), 76.482 MAE Score, 23,990 Messages, and 34.98 % Unanswered Threads (%).
- Thread Impact:** A bar chart showing the impact of various threads.
- Top Contributors:** A bar chart showing the top contributors.
- Top Influencers:** A bar chart showing the top influencers.
- Member MAE Score:** A chart showing member scores.
- Group Members:** A table listing members with their names, emails, active status, and message counts.

Easy to embed into apps

```
<iframe  
src="https://server/reports/powerbi/  
/ReportName?rs:Embed=true"  
width="800px"  
height="600px"></iframe>
```

# Install in Minutes



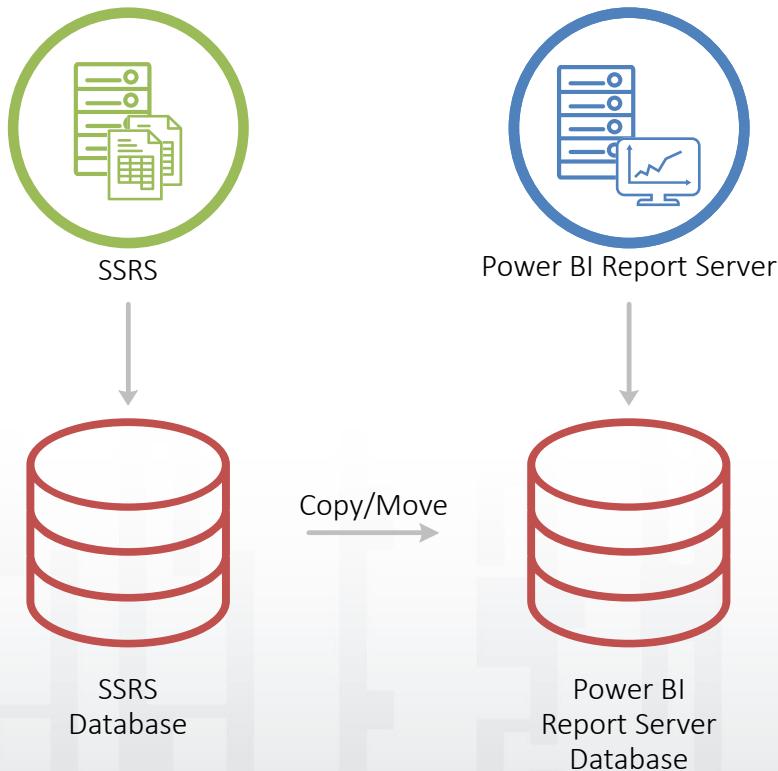
Easy standalone installation and set up

Zero impact on database ETL processes

## Requirements

- Windows Server 2012+
- SQL Server Database Engine (2008 SP4+)
- SQL Server Analysis Services (2012+)

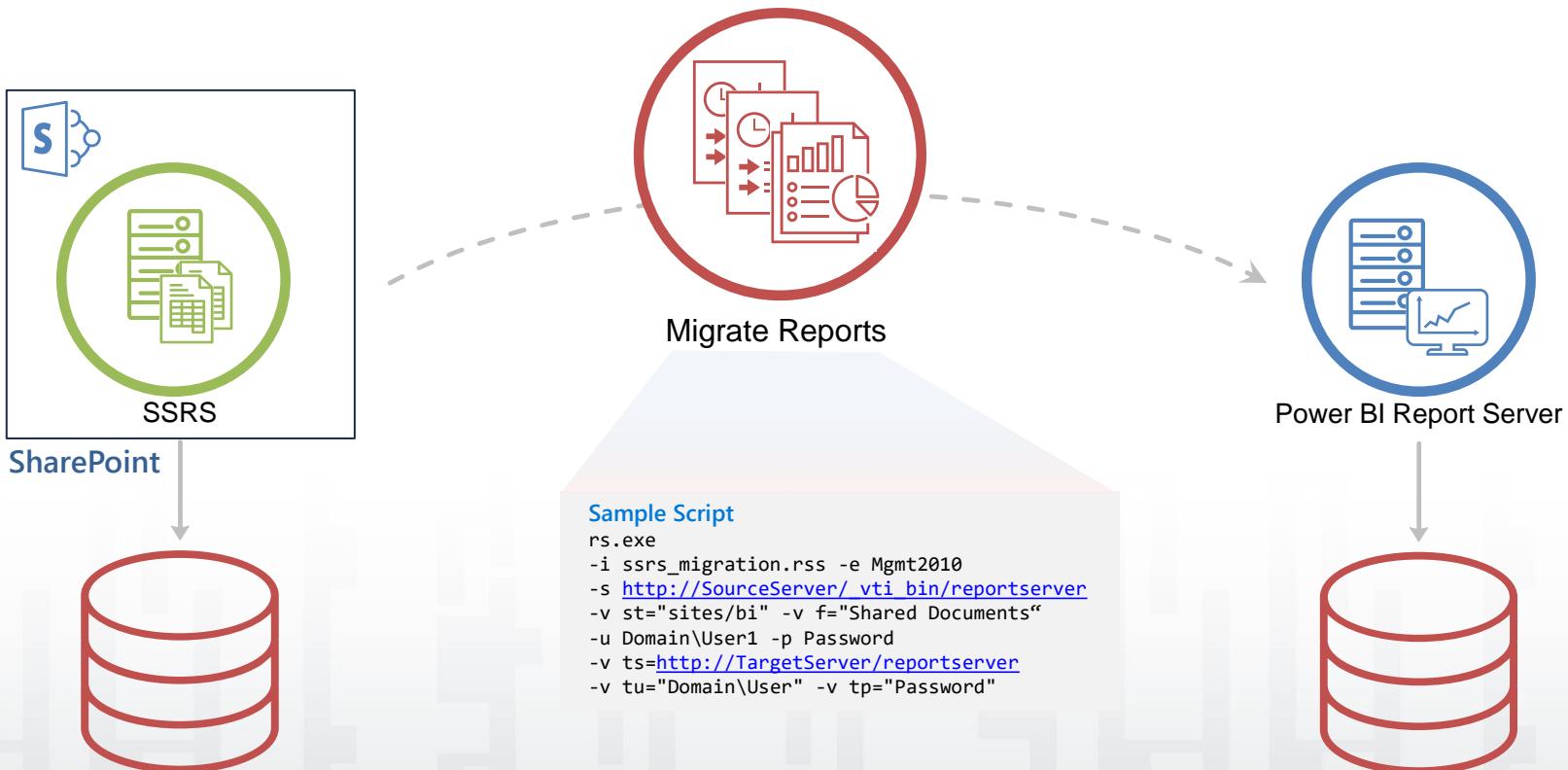
# Migrate from SSRS (Native mode)



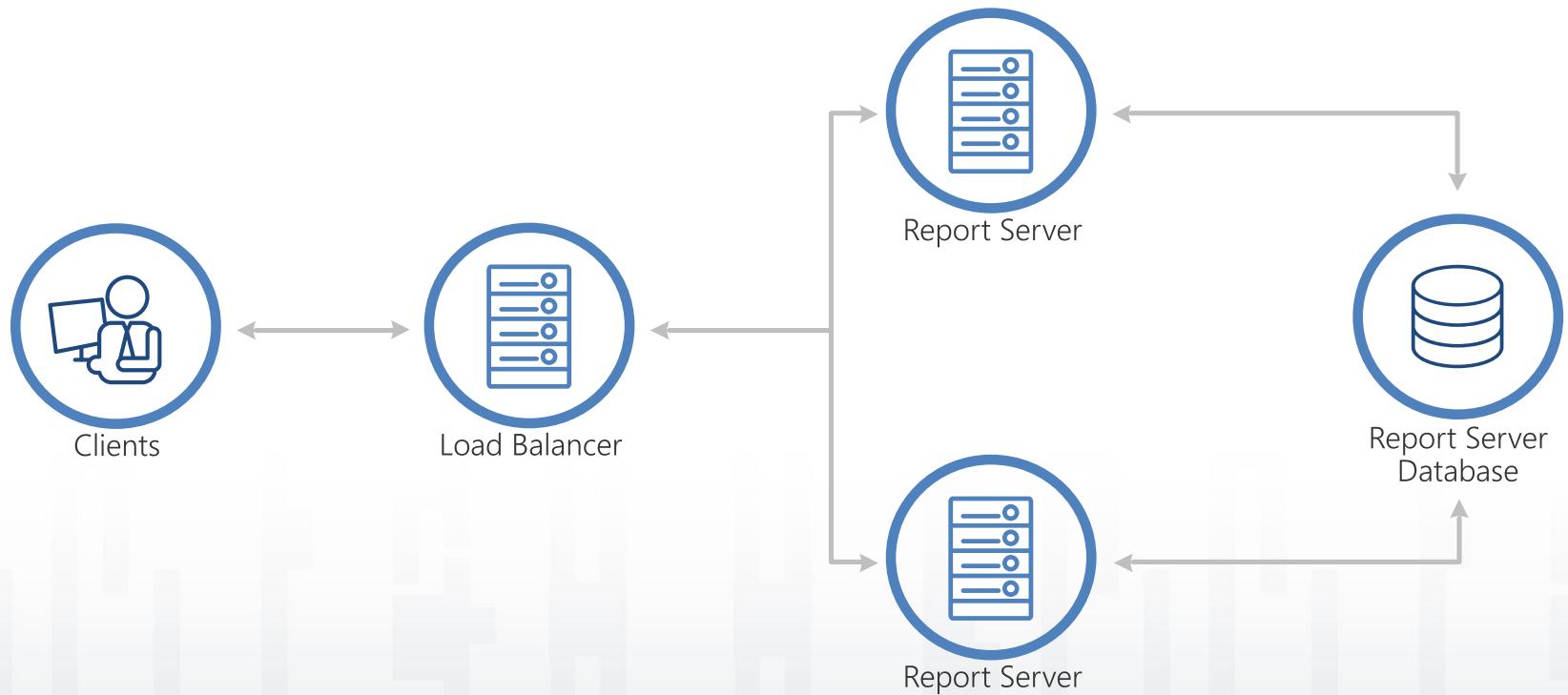
## Three Step Migration

1. Clone the database hosting all your SSRS reports
2. Set up Power BI Report Server using the installation wizard
3. Connect Power BI Report Server to the cloned database via Report Server Configuration Manager

# Migrate from SSRS (SharePoint-Integrated Mode)



# Scale-out Power BI Report Server



# Create, Publish, and Distribute Power BI Reports

## ■ Create Reports

- Author beautiful reports with Power BI Desktop. Visually explore data with a freeform drag-and-drop canvas and modern data visualizations.



## ■ Publish to Power BI Report Server

- Publish reports directly to Power BI Report Server. Organize your reports in folders, manage access, and update as necessary.



## ■ Distribute and Consume Across Devices

- Share reports for your users to consume on the web and across mobile devices to meet a range of business needs.



# Comparing Reporting Options

	SQL Server Reporting Services	Power BI Report Server	Power BI
	On-premises	On-premises	Cloud
		✓	✓
			✓
			✓
			✓
			✓
			✓
	✓	✓	
	✓	✓	✓
	Fixed Lifecycle Policy	Modern Lifecycle Policy	Fully Managed Service

# What's new in Power BI Report Server (August 2017)

- **Ability to publish Power BI reports on-premises (May / June)**
  - Support for custom visuals
  - Support for Analysis Services live connections only with more data sources to come
  - Power BI Mobile app updated to display Power BI reports hosted in Power BI Report Server
- **Publishing a Power BI Desktop Report to PBIRS**
- **Enhanced collaboration in reports with comments**
- **Support for data sources other than Analysis Services in Power BI Report Server**
- **Viewing and interacting with Excel workbooks**
- **Support for new table and matrix visuals**

# Review

## ■ Introduction

- Microsoft Reporting Ecosystem Overview
- What's New in SQL Server 2016 Reporting Services
- SSRS Features and Capabilities
- Microsoft SQL Server Mobile Report Publisher
- Power BI Report Server

# References

- **Power BI Report Server**
  - **Power BI Premium, Apps and Report Server**
    - [https://www.youtube.com/watch?v=0z\\_ciMcEn48](https://www.youtube.com/watch?v=0z_ciMcEn48)
- **Introducing Power BI Report Server**
  - <https://powerbi.microsoft.com/en-us/report-server/>
  - <https://powerbi.microsoft.com/en-us/blog/microsoft-accelerates-modern-bi-adoption-with-power-bi-premium/>
- **TechNet Labs**
  - **Exploring What's New in SQL Server 2016 Reporting Services for Mobile Reporting**  
<https://vlabs.holystems.com/vlabs/technet?eng=VLabs&auth=none&src=vlabs&altadd=true&labid=23109&lod=true>
  - **Exploring What's New in SQL Server 2016 Reporting Services for Paginated Reporting**  
<https://vlabs.holystems.com/vlabs/technet?eng=VLabs&auth=none&src=vlabs&altadd=true&labid=21981&lod=true>
- **GitHub**
  - <https://github.com/Microsoft/Reporting-Services>

# References (2)

## ■ Business Intelligence Blogs

- Microsoft Power BI Blog  
<https://powerbi.microsoft.com/en-us/blog/category/announcements/>
- GuyinACube  
<https://guyinacube.com/>
- Business Intelligence Blogs  
<https://blogs.msdn.microsoft.com/business-intelligence/>
- SQL Server Reporting Services Team Blog  
<https://blogs.msdn.microsoft.com/sqlrsteamblog/>
- Christopher Finlan  
<https://twitter.com/cmfinlan>
- Riccardo Muti  
<https://twitter.com/RiccardoMuti>
- Christopher Finlan  
<https://christopherfinlan.com/>

# Questions?



Don't forget to complete an online evaluation!

**SQL SERVER 2016/2017:  
ENTERPRISE REPORTING AND MOBILE CAPABILITIES**

Your evaluation helps organizers build better conferences  
and helps speakers improve their sessions.

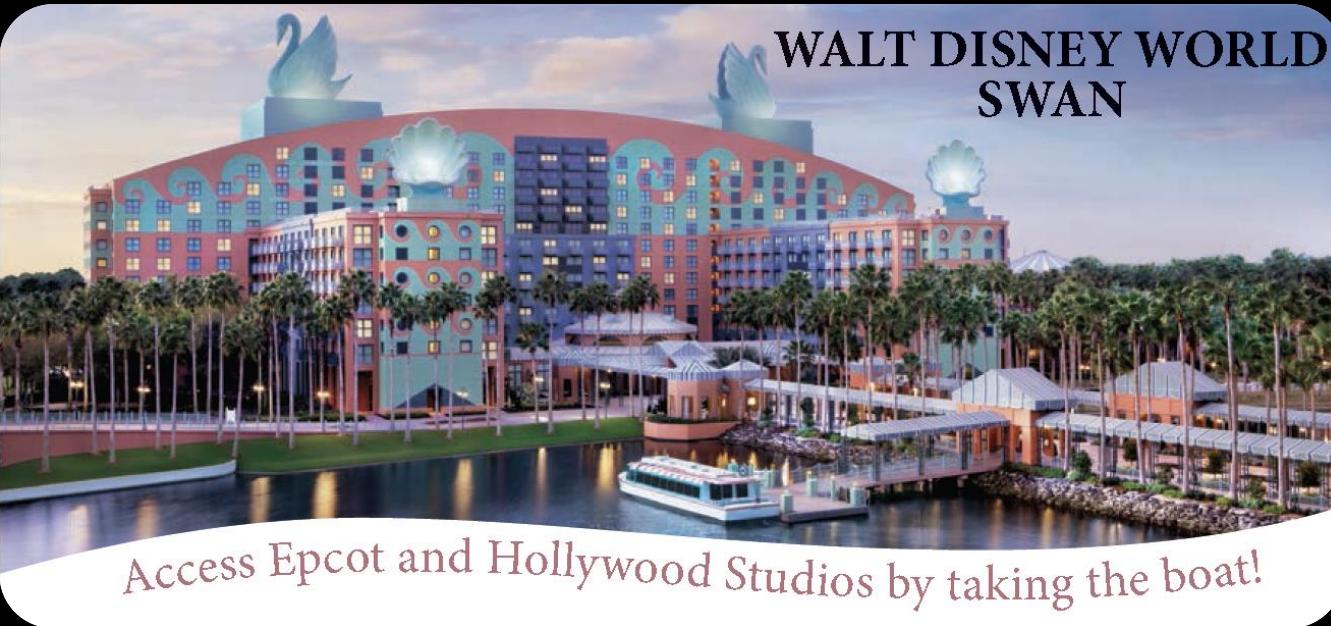
 **SQL**  
*intersection*

The logo consists of a stylized icon made of overlapping blue squares and rectangles on the left, followed by the text "SQL" in a large, bold, blue serif font, and "intersection" in a smaller, italicized, dark gray sans-serif font below it.

**Thank you!**

# Save the Date!

[www.SQLIntersection.com](http://www.SQLIntersection.com)



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SWAN

2018

Mar 25-28

*We're back in Orlando!*



*Leave the every day behind and enter a world of wonder and enchantment at the Walt Disney World® Resort.*

*Located in the heart of the most magical place on earth, the Walt Disney World Swan and Dolphin Resort provides a truly extraordinary backdrop for our event! Beautiful tropical landscaping, tranquil waterways, and classic art and architecture work together to create a stunning landmark!*