

SQLskills Immersion Event

IEAzure: Azure VMs and Azure SQL Database

Module 9: Additional Azure Features

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Overview

- **Azure Synapse - Azure SQL Data Warehouse**
- **Azure Data Factory**
- **Power BI**
- **Azure Analysis Services**

Azure Synapse

- **Up to 14 time faster and costs 94% less than other cloud providers**
- **Massive query concurrency**
 - Democratize data across your enterprise
- **Quick and easy provisioning**
 - Provision thousands of compute cores in less than five minutes, scale to a petabyte in just hours
- **Advanced security**
 - Protect your data with virtual networks, virtual network service endpoints, advanced threat detection, always-on encryption, auditing, and simplified secure access
- **SQL-based and fully managed**
- **Pay for what you use**
- **Cost as little as USD \$1.20 /hour**

Azure Synapse

- **Strong Ecosystem**
 - Integrate with leading data preparation and visualization vendors
- **Industry-leading compliance**
 - Ensure peace of mind with more than 50 government and industry compliance certifications, including HIPAA
- **Integrated data processing**
 - Ingest and query from multiple data types and sources within a solution
- **Elastic design**
 - Scale compute and storage independently
- **Fully managed infrastructure**
 - Automate infrastructure allocation and workload optimization based on data analysis, leverage the built-in advisor to help optimize
- **Global availability**
 - 40 Azure regions

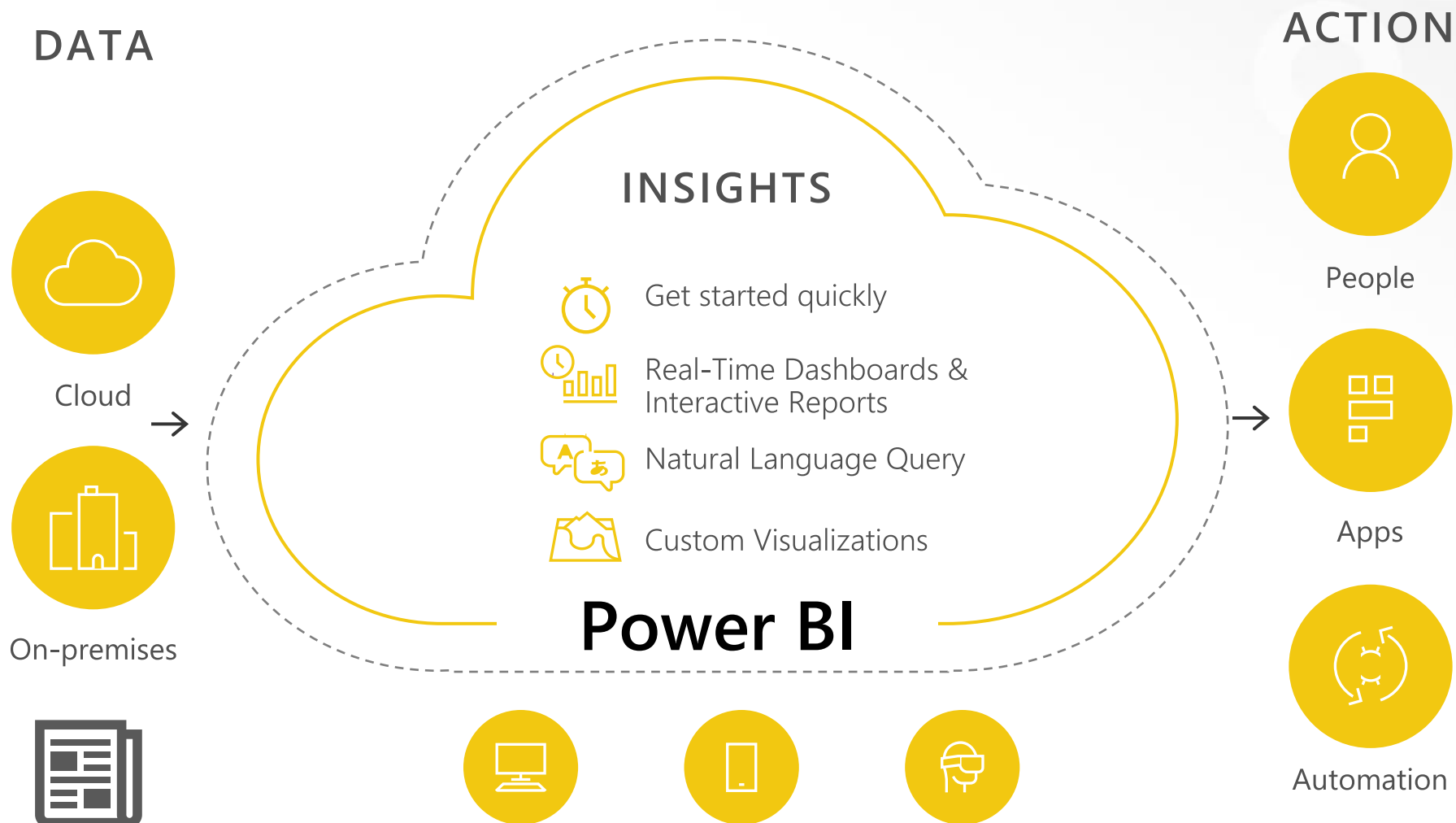
Azure Data Factory

- **Globally-deployed data movement service in the cloud**
- **Access and ingest data with built-in connectors**
- **Build scalable data flow with codeless UI, or write you own**
 - Visual drag-and-drop UI
 - Build, deploy, transform, and manage your data
- **Schedule, run, and monitor your data pipelines**
- **SSIS migration to cloud**
 - Lift and shift your SSIS packages to Azure
 - Get high availability and scalability, and reduce your cost
- **Multiple language support**
 - Python, .Net, or ARM to build pipelines
- **Hybrid data movement and transformation**
 - More than 80 natively supported connectors

Azure Analysis Services

- Transform complex data into one version of the truth
- Match performance to the speed of the business
- Secured access anytime, from anywhere
- SQL Server 2016 tabular models can transfer in
- Same secure environment as other resources
- Compliance is built-in
- Cost as little as USD \$ 0.132 /hour for developer
\$ 0.43 /hour for basic
\$ 0.81 /hour for standard

Power BI: Experience Your Data Any Data, Any Way, Anywhere



Build Personalized Self-Service Dashboards

- Dashboards to view key data, in single pane of glass
- Build dashboards by pinning visualizations from reports, Q&A, or other visuals
- Data is visualized on dashboard as tiles
- Change tiles - resize, move, rename, pin, delete, add hyperlink
- Choose different view modes:
 - Full Screen
 - Fit to Screen
 - In-Focus (for individual tiles)
- Control color scheme of dashboard
 - Branding templates are now available

Power BI Reports and Dashboards

- **Visualize data in a variety of ways**
- **Growing number of visualization types**
 - Donuts, basic area, waterfall, filled maps, tree maps, funnel, gauges combo charts and more
 - Custom visuals available from Power BI Visuals Gallery ([Office Store](#)) & Power BI Marketplace (In Tool)
 - Tools to develop, test, package new custom visuals
- **Visualizations on report page are connected – select value in one visualization to change other visualizations**
- **Full screen pop out mode for report visuals to show additional details**

Power BI Reports and Dashboards

- **PBI Service Key Features:**
 - Cortana Integration and Q&A
 - Quick Insights enhancements including discovery of more data patterns
 - PowerPoint support and built-in story telling features
 - Publish Excel content directly to Power BI
 - Real-time dashboard widgets and global filters
 - Alerts and notifications keep you informed and up to date
 - Enhanced administration, auditing, and cross-tenant support

Power BI Premium

- Offers dedicated cloud compute and storage resources
- Provides on-premises reporting capabilities with Power BI Report Server
- Allows for deploying Power BI content to multiple Azure regions
- Provides incremental data refresh
- Publish and consume paginated reports in Power BI
- Provides the ability to monitor performance of dedicated compute and memory resources
- Up to 10GB per individual data set
- Maximum 100TB storage compared to 10GB per user with Power BI Pro
- Up to 48 automatic refreshes per day – 8 with Power BI Pro

Power BI Desktop

- Report authoring made easy, many drag-and-drop visualizations
- You can connect to your data, wherever it is
- Prepare and model your data with confidence and ease
- You can provide advanced analytics with the familiarity of Excel
- Create interactive reports for your customers that are customized for their business
- You can author for everyone, anywhere by creating mobile-optimized reports, publish to the cloud, or on-premises

Power BI Desktop

- Prepare, explore, report, and collaborate with Power BI Desktop
- Acquire and prepare data with extensive query capabilities
- Establish data structure and transform and analyze data
- Explore data in new ways through a freeform, drag-and-drop canvas
- You can author reports with a broad range of modern data visualizations
- Publish directly to Power BI Report Server or Power BI Service
- Download for free

SQL Server Mobile Report Publisher

- Stand-alone tool for creating rich mobile reports



Data Sources

- In Report Builder and Report Designer, you can add a shared data source or create an embedded data source for your report
- A shared data source is a set of data source connection properties that multiple reports, models, and data-driven subscriptions can reference
- Shared data sources are required for report models, however are optional for data-driven subscriptions and reports
- Data sources can be created, modified, and deleted
- Data sources can be converted from shared to embedded and embedded to shared
- Datasets represent the result set from running a query command on a data source

Data Sets

- Datasets represent the result set from running a query command on a data source
- Embedded datasets: instead of working directly with data, in Report Builder or Report Designer, you work with metadata that represents the data that will be retrieved in the report.
- Shared datasets: use shared datasets when you want to use a database in more than one report. Use Report Builder in shared dataset design view to create shared datasets.

Demo Mania

- **Power BI Desktop Walkthrough**
 - **My favorite visuals**
 - **Features that pop**
 - **Marketplace**

Key Takeaways

- Some SQL Server modules that we are used to have been enhanced by robust cloud versions
- Azure SQL Data Warehouse
- Azure Data Factory is comparable to SSIS
- Azure Analysis Services is finally a cloud solution
- Power BI can be leveraged on-premises and in the cloud

Review

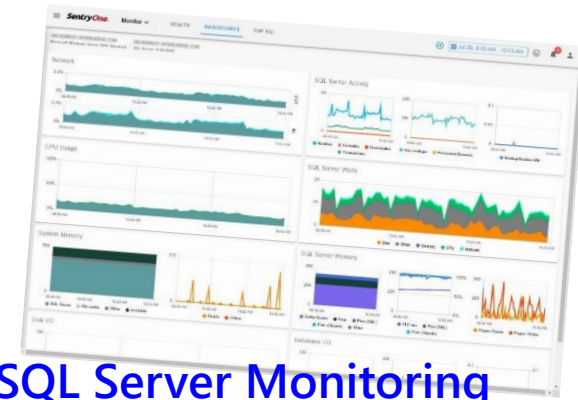
- **Azure SQL Data Warehouse is an elastic database warehouse as a service with enterprise class features**
- **Azure Data Factory – data transformation**
- **Power BI – any data, any way, anywhere**
- **Azure Analysis Services – enterprise analytics engine as a service**

REMINDER:

Leverage Great Products!



- And now you believe us... even with all of this content, you just can't know everything
- SQL Server is powerful, complex, and has lots of different potential issues, let third party software help!
- SQLskills partners with SentryOne because we really feel they've made the best suite of SQL Server products available
- **LEARN MORE:** Join Andy Yun, Principal Solutions Engineer from SentryOne on Friday, September 25, at 11:00am PT / 2:00pm ET
 - ❑ **Going Beyond Just Monitoring With SentryOne**
 - ❑ <https://global.gotomeeting.com/join/347894741>
 - ❑ Attendees of the GoToMeeting will EACH receive:
 - ❑ SQL Sentry Premium subscription license (6 months)
 - ❑ Raffle for additional SentryOne gift pack



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Questions?

