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SQL Server Data Classification with SQL Server 2019 and Azure SQL Database

Steve Hughes

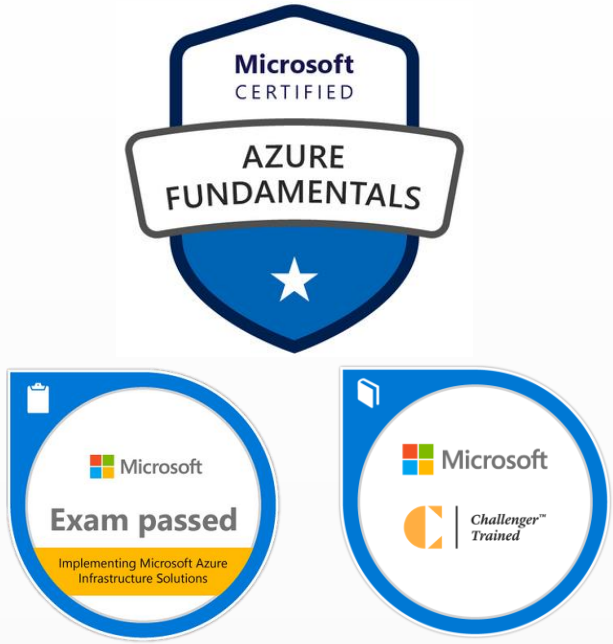
Director of Consulting

June 2020

PRAGMATIC WORKS

About Steve

DATA on WHEELS



- Director of Consulting
- 20+ Years with SQL Server, Microsoft BI, and Azure
- https://www.linkedin.com/in/dataonwheels/
- steve@dataonwheels.com
- Blog: www.dataonwheels.com – Look for deck and follow up here

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Beyond the Database

- Current protections in SQL Server to protect the database
  - Encryption
  - Row Level Security (RLS)
  - Active Directory
- Focus on data at rest or in motion

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Data Classification & Labeling

- Data Classification has multiple purposes
  - Classify to identify sensitive data
  - Classify to organize data
- Labeling
  - Classification labeling makes sensitive data visible
- SQL Server Can Help!
  - SQL Server Management Studio 17.5 or later – Data Discovery & Classification
  - SQL Server 2012 and later supports classification labeling in the database

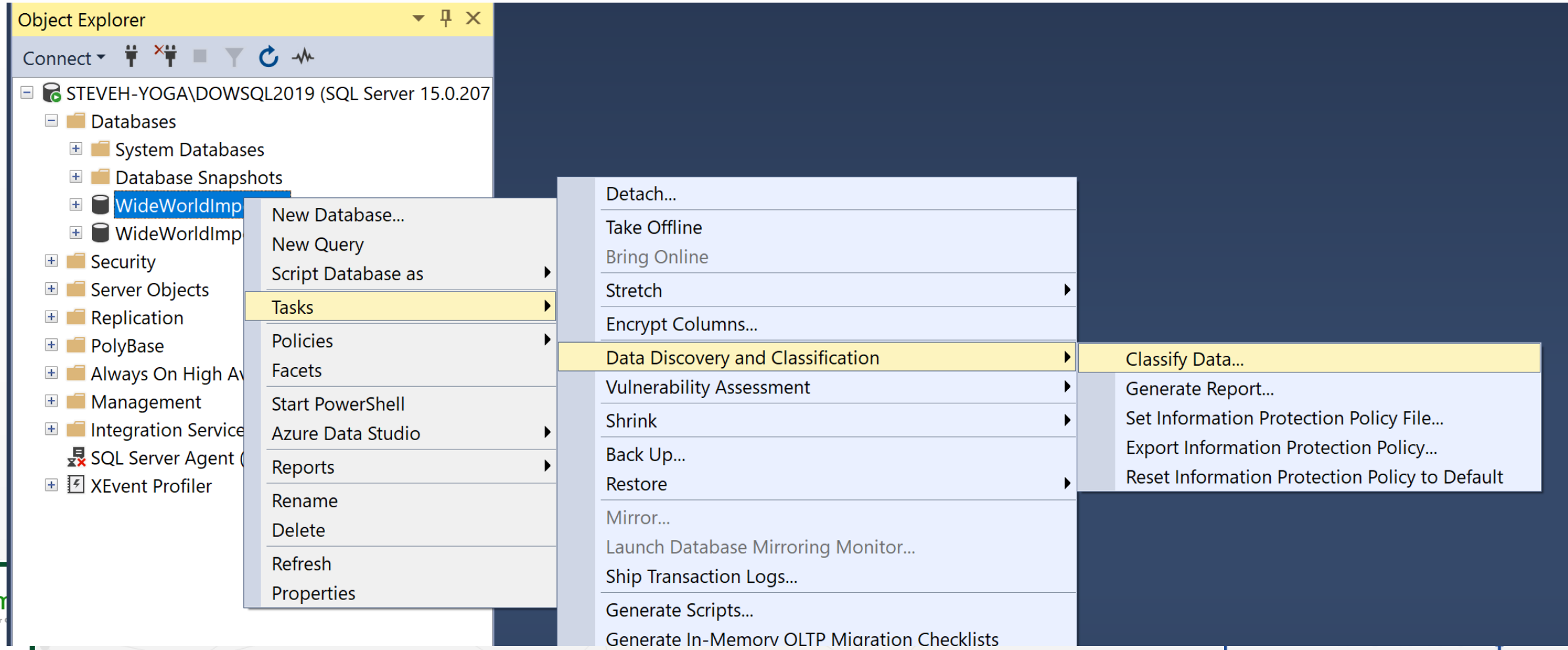
Today's Demos Use

- SQL Server Management Studio 18.5
  - 18.4+ Allows you to manage the information protection policy
- SQL Server 2019 (Developer Edition)
  - sys.sensitivity_classifications system catalog view

SQL Server 2012, 2014, 2016, 2017 use Extended Properties to support labeling

- *sys_information_type_name*
- *sys_sensitivity_label_name*

Let’s classify, label, report



Steps in SSMS

1. Choose the database to discover data on
2. Use the Classify Data … tool
3. Review results by clicking results bar
    1. Columns discovered
    2. Information Type
    3. Sensitivity Label
4. Accept Selected Recommendations
5. Add Classification
6. Save
7. View Report

Be Aware

- Your mileage will vary when not using English
- Additional GPDR types may not be identified yet
- Expect ongoing improvements
  - The tool is delivered with SSMS not SQL Server

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Built In Information Types

- Networking
- Contact Info
- Credentials
- Credit Card
- Banking
- Financial
- Other
- Name
- National ID
- SSN
- Health
- Data of Birth
- n/a

Built In Sensitivity Labels

- Public
- General
- Confidential
- Confidential – GPDR
- Highly Confidential
- Highly Confidential – GPDR
- [n/a]

Data Classification in Azure

- Part of the Advanced Data Security with SQL Database, SQL Managed Instance, and Synapse (in preview)
- Advanced Data Security incurs an additional cost - $15/server/month
- Azure supports access logging with classified data

- Let’s check out Azure now

Data Is Classified, Now What?

- Let's look at Information Protection Policies in SQL Server
  - You can customize this to match what you need
- Microsoft is looking at more improvements and capabilities
  - Look for new capabilities as part of SSMS
- Azure SQL Database has auditing available built in to support IP policies, SQL Server does not have this capability built in yet
  - Triggers potentially can be used in SQL Server if Audit of these are required, but still a manual process

We have a great start here and improvements will continue to come in SSMS.

Have Any Questions?

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