DA-100 Analyzing Data with Power BI 2

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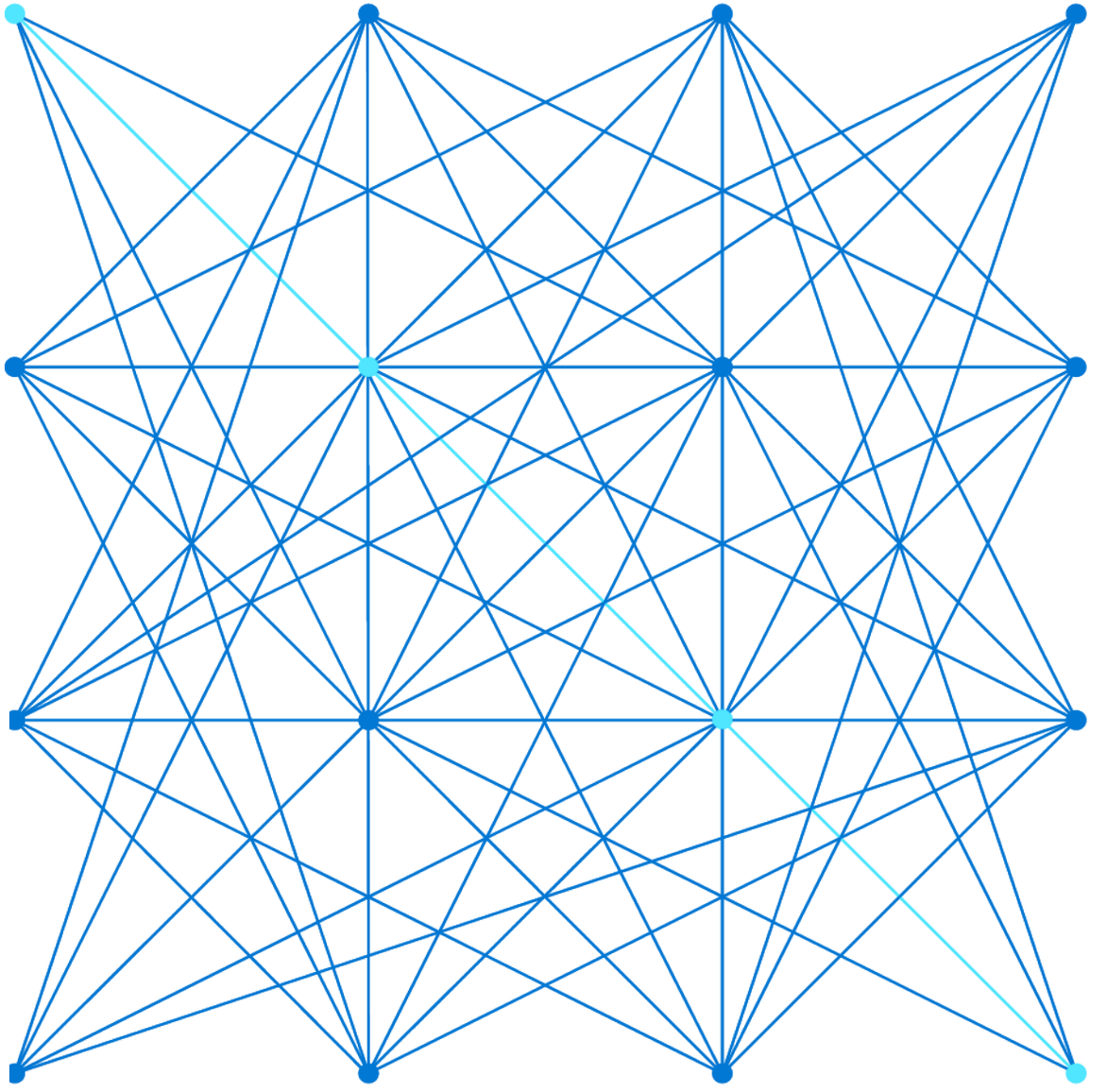

Module 2: Get Data in Power BI

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Learning Objectives

You will learn the following concepts:

- Getting data from various data sources
- Optimizing Performance
- Resolving data errors

Lesson 1:
Get data from various data sources

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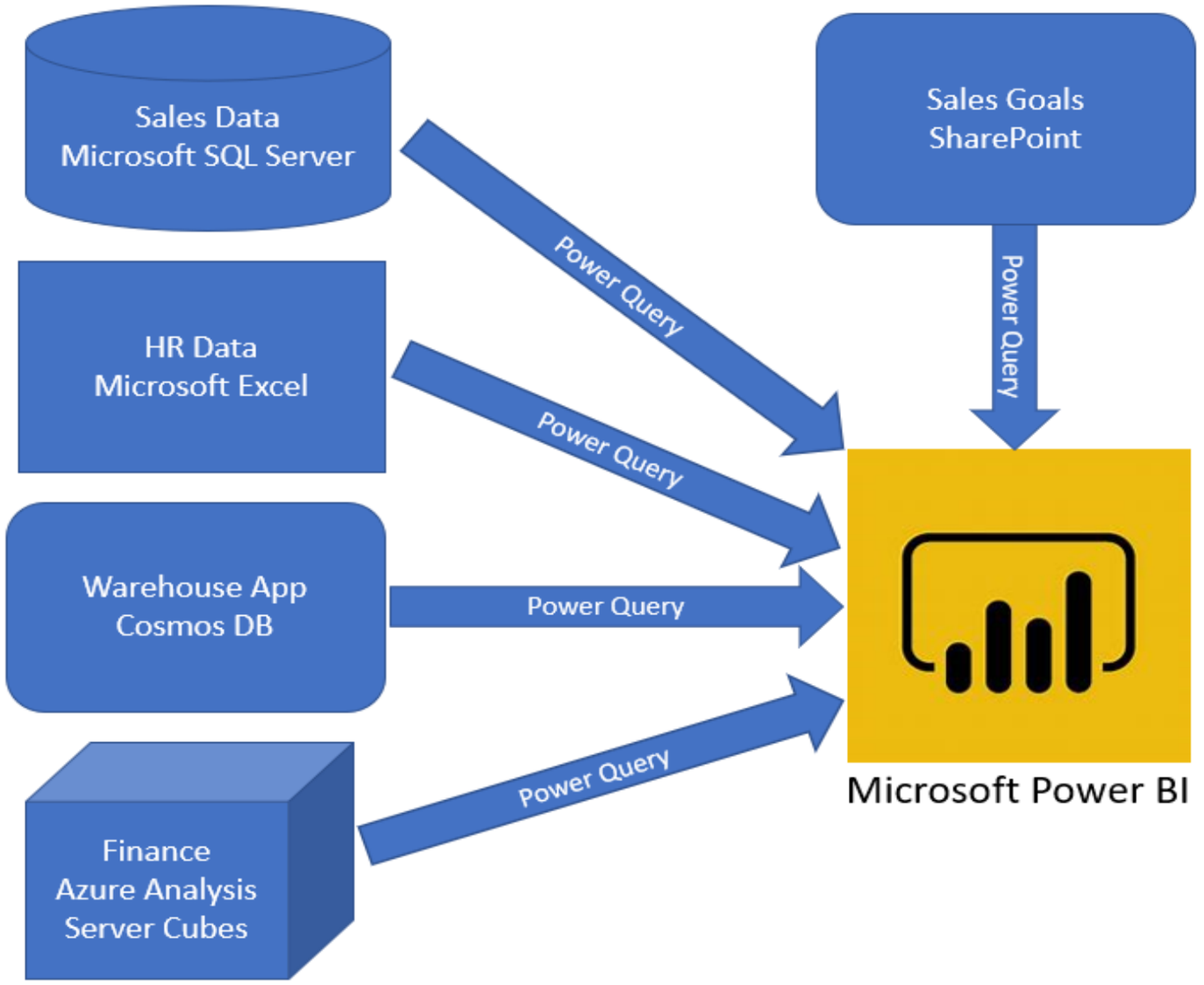
Introduction to getting data

The first step in the data analysis process is identifying and getting data.



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Get data from flat files

ResellerSales_202006.csv

File Origin: 1200: Unicode | Delimiter: Comma | Data Type Detection: Based on first 200 rows

SalesOrderNumber	SalesOrderLineNumber	OrderDate	DueDate	ShipDate	ProductKey	ResellerKey	PromotionKey
SO71691	2	6/1/2020	6/11/2020	6/8/2020	434	104	
SO71691	4	6/1/2020	6/11/2020	6/8/2020	222	104	
SO71774	1	6/1/2020	6/11/2020	6/8/2020	436	609	
SO71774	2	6/1/2020	6/11/2020	6/8/2020	418	609	
SO71775	1	6/1/2020	6/11/2020	6/8/2020	573	595	
SO71775	2	6/1/2020	6/11/2020	6/8/2020	555	595	
SO71775	3	6/1/2020	6/11/2020	6/8/2020	490	595	
SO71776	1	6/2/2020	6/12/2020	6/9/2020	514	106	
SO71777	1	6/2/2020	6/12/2020	6/9/2020	408	128	
SO71777	2	6/2/2020	6/12/2020	6/9/2020	436	128	
SO71778	1	6/2/2020	6/12/2020	6/9/2020	467	557	
SO71778	2	6/2/2020	6/12/2020	6/9/2020	566	557	

Load | Transform Data | Cancel

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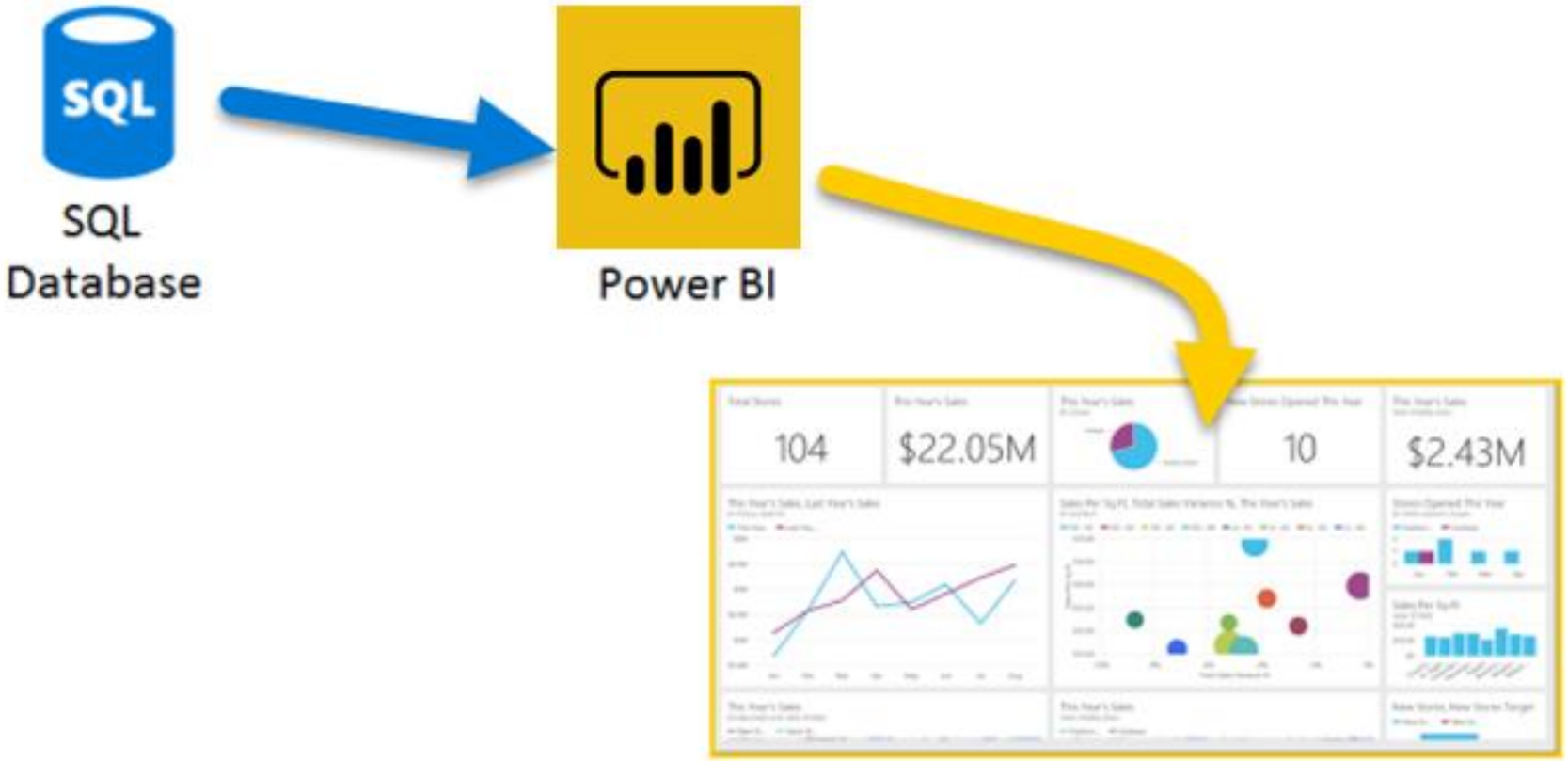
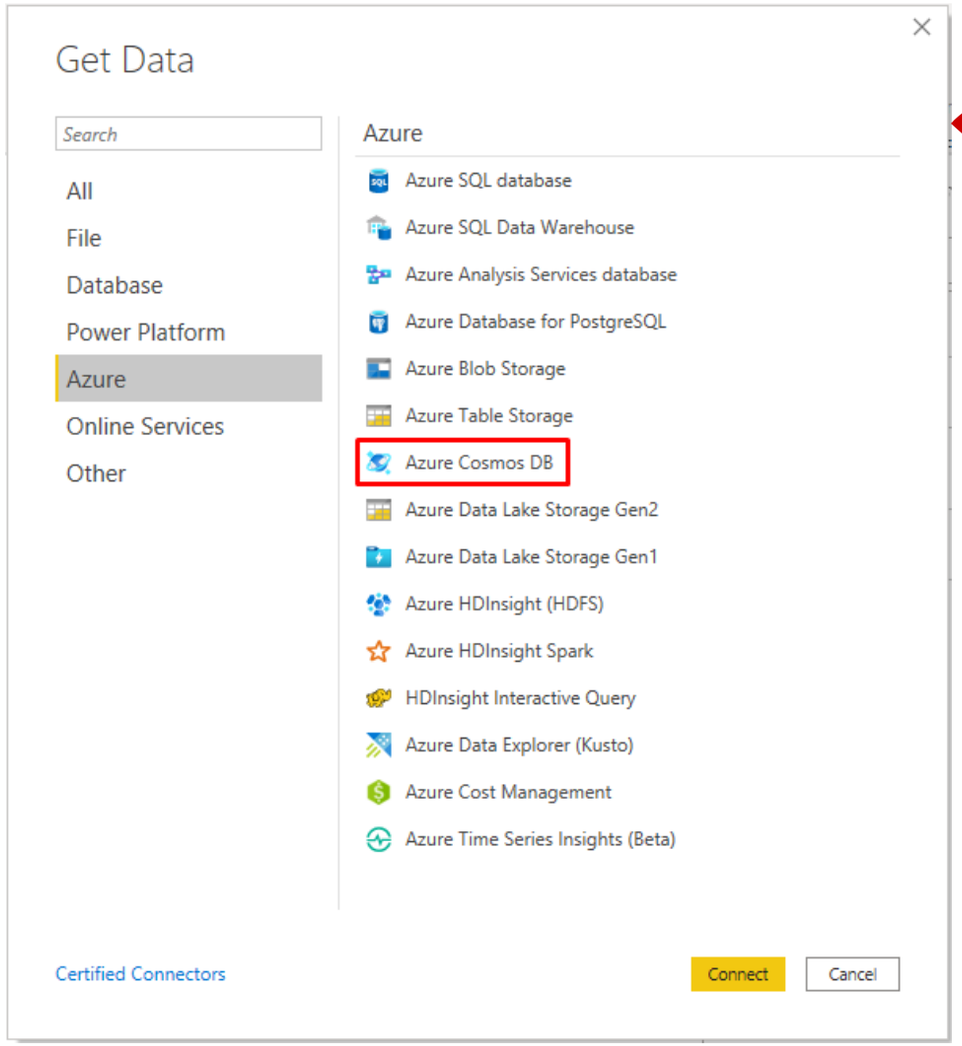
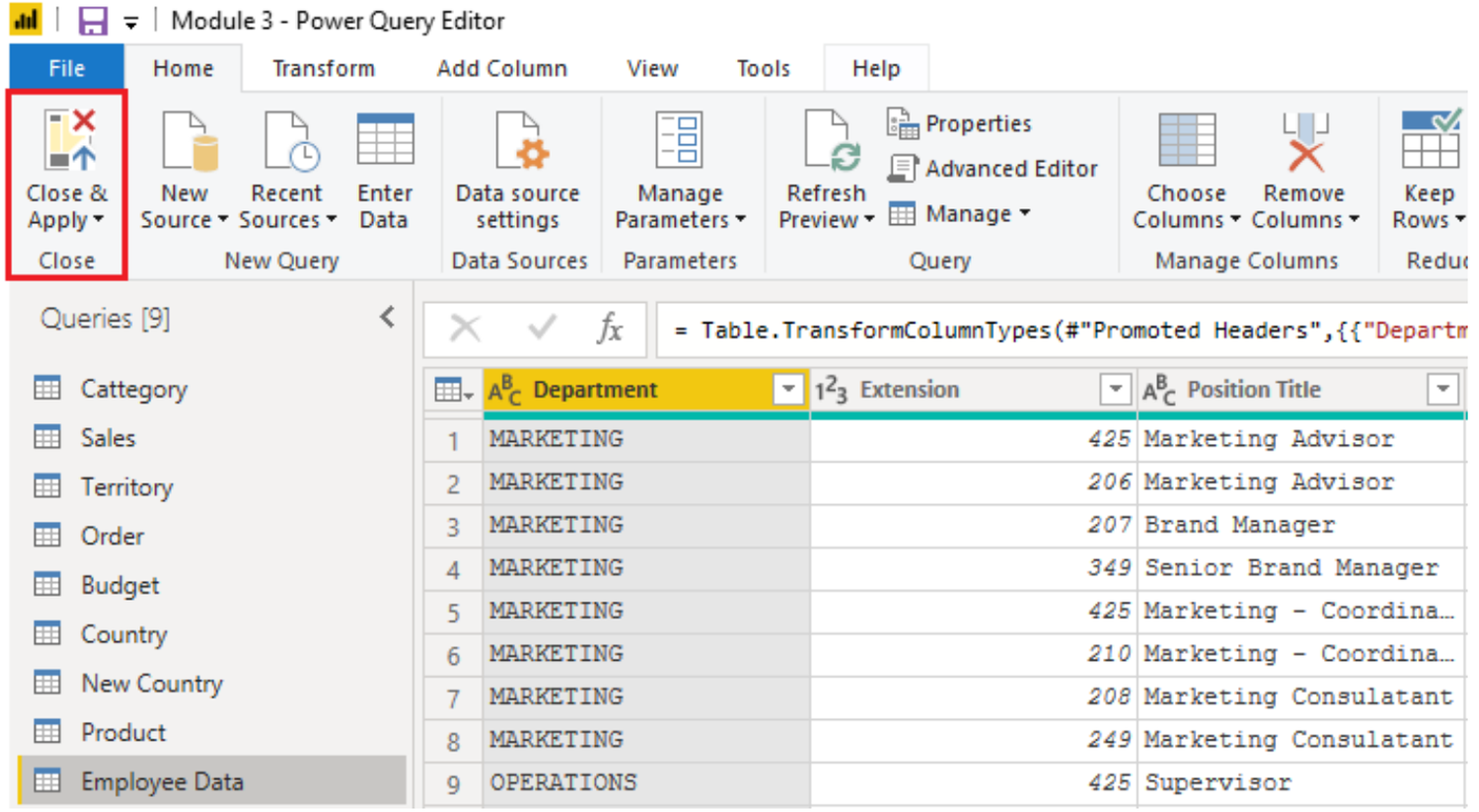
Get data from relational data sources

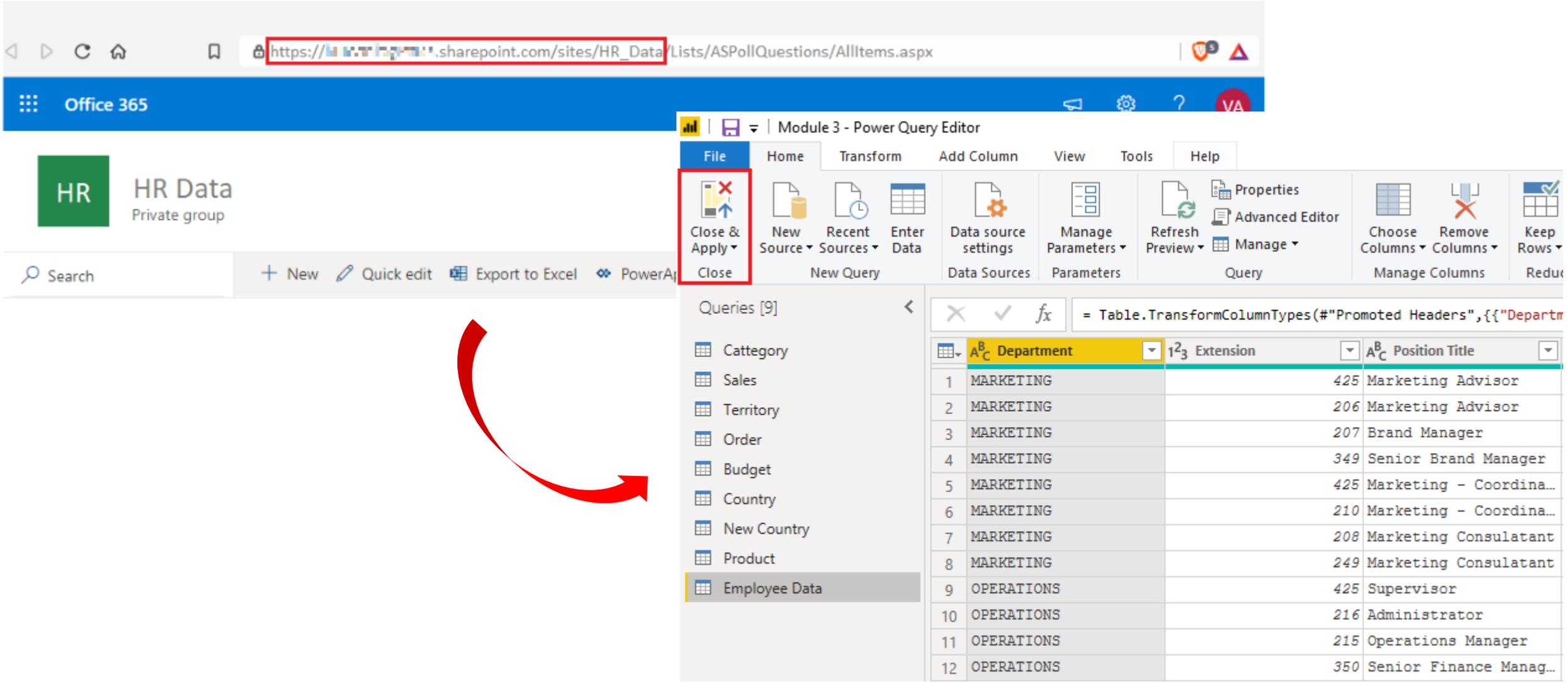


Get data from NoSQL





Get data from applications



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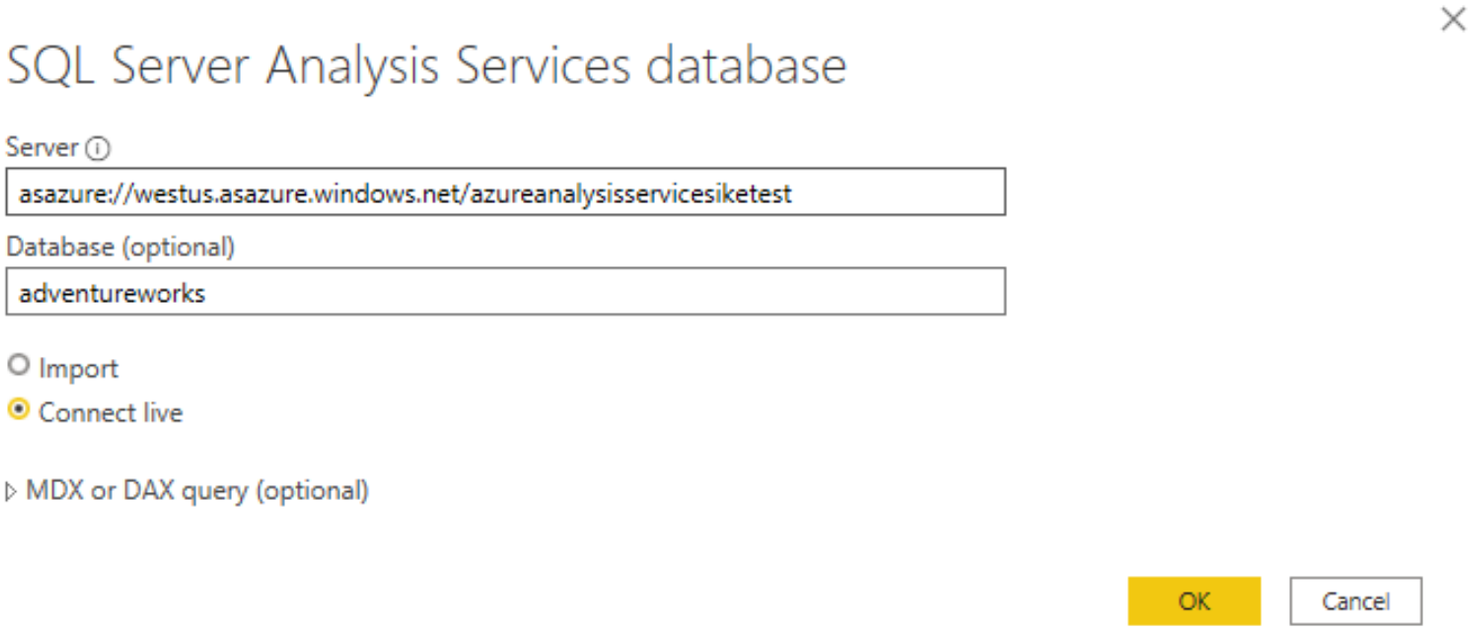
Get data from Analysis Services

An analytical data engine that lets you digest data from multiple data sources and create calculations on the fly.



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Review Questions

- Q01 – Which query language do you use to extract data from Microsoft SQL Server?
- A01 – T-SQL

- Q02 – You're creating a Power BI report with data from an Azure Analysis Services Cube. When the data refreshes in the cube, you would like to see it immediately in the Power BI report. How should you connect?
- A02 – Connect Live

- Q03 – What can you do to improve performance when you are getting data in Power BI?
- A03 – Do some calculations in the original data source.

Lesson 2:
Optimize Performance

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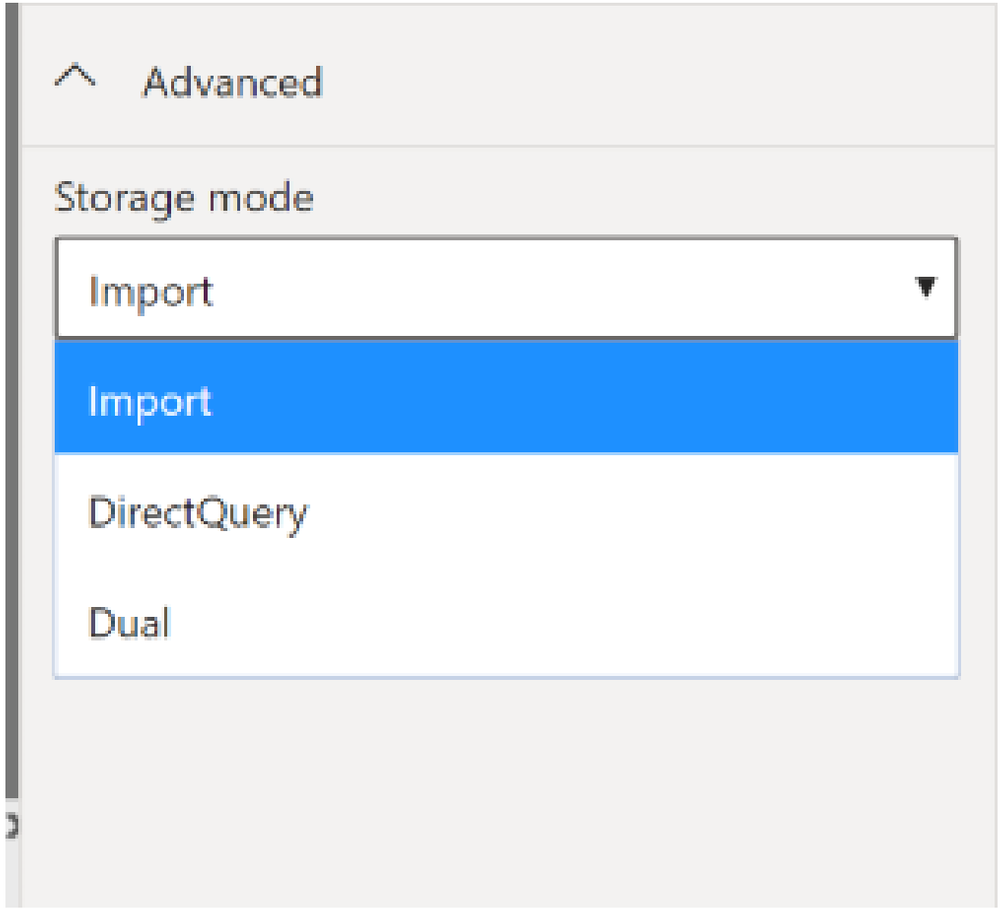
Select a Storage Mode

- Specifies the storage mode of a table and lets Power BI determine how to cache data for reports.
- Set the storage mode for each table individually.



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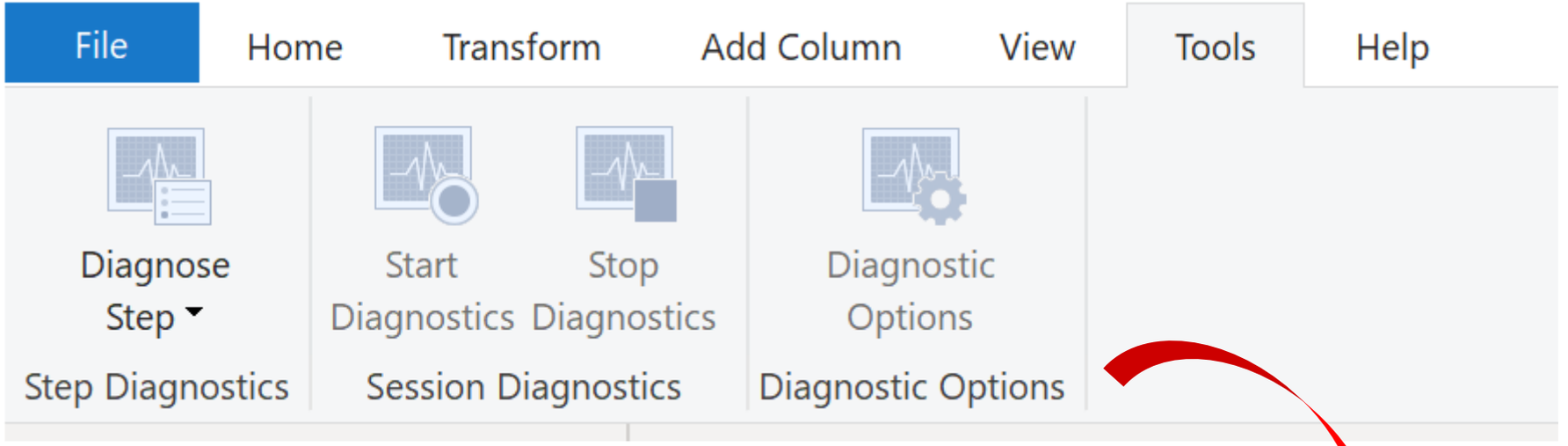
Fix Performance Issues



Queries [17]

- Diagnostics [2]
  - Diagnostics_Detailed...
  - Diagnostics__2020-0...

	Id	Query	Step	Exclusive Duration	Category	Data Source Kind
1	1.1	Product	Changed Type	0.00:00:00.0457545	Evaluator	null
2	1.2	Product	Source	0.00:00:01.9567741	Evaluator	null

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Optimize Query Performance

- Performance in Power Query depends heavily on the performance at the data source.
- Follow performance tuning guidelines of the source product.
- Some performance tuning can be done in Power BI.

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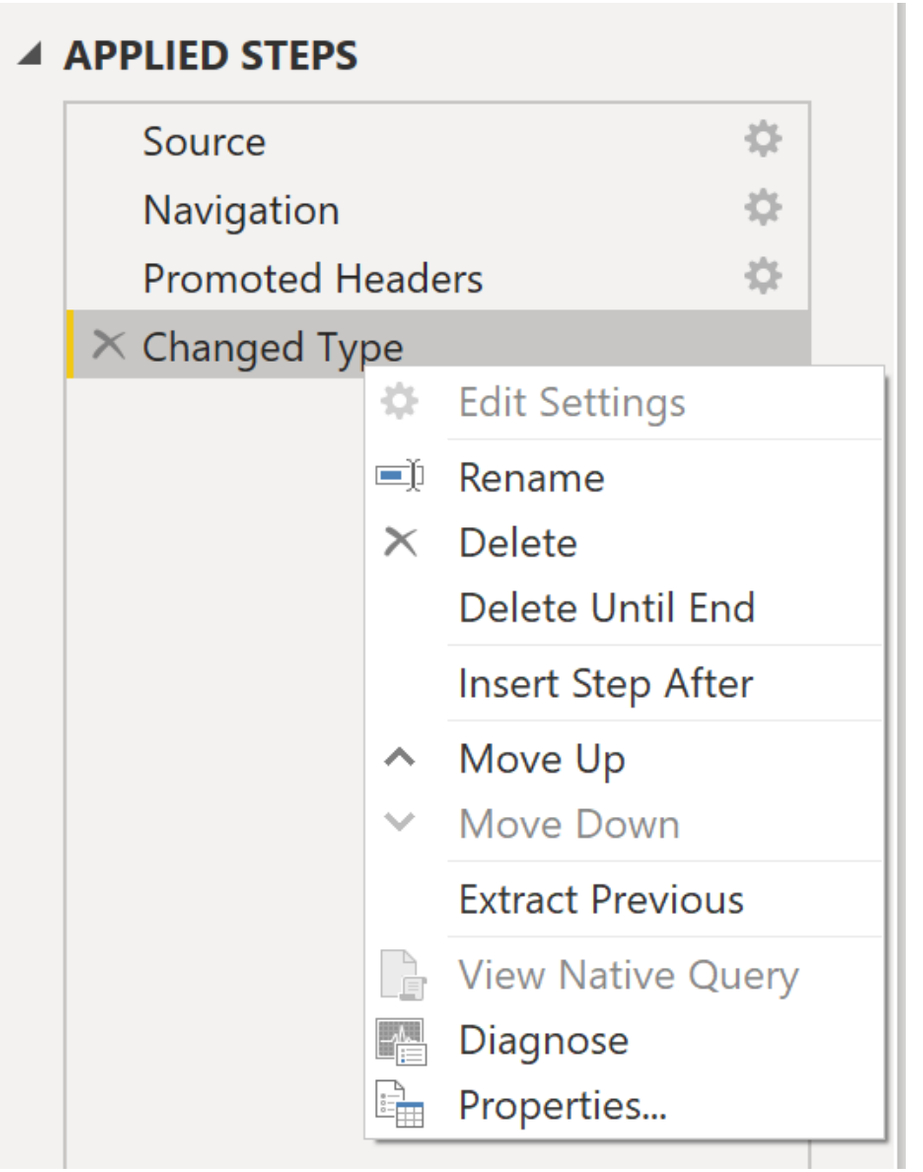
Query Folding

The process that lets Power Query generate a single query statement to retrieve and transform source data.



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Review Questions

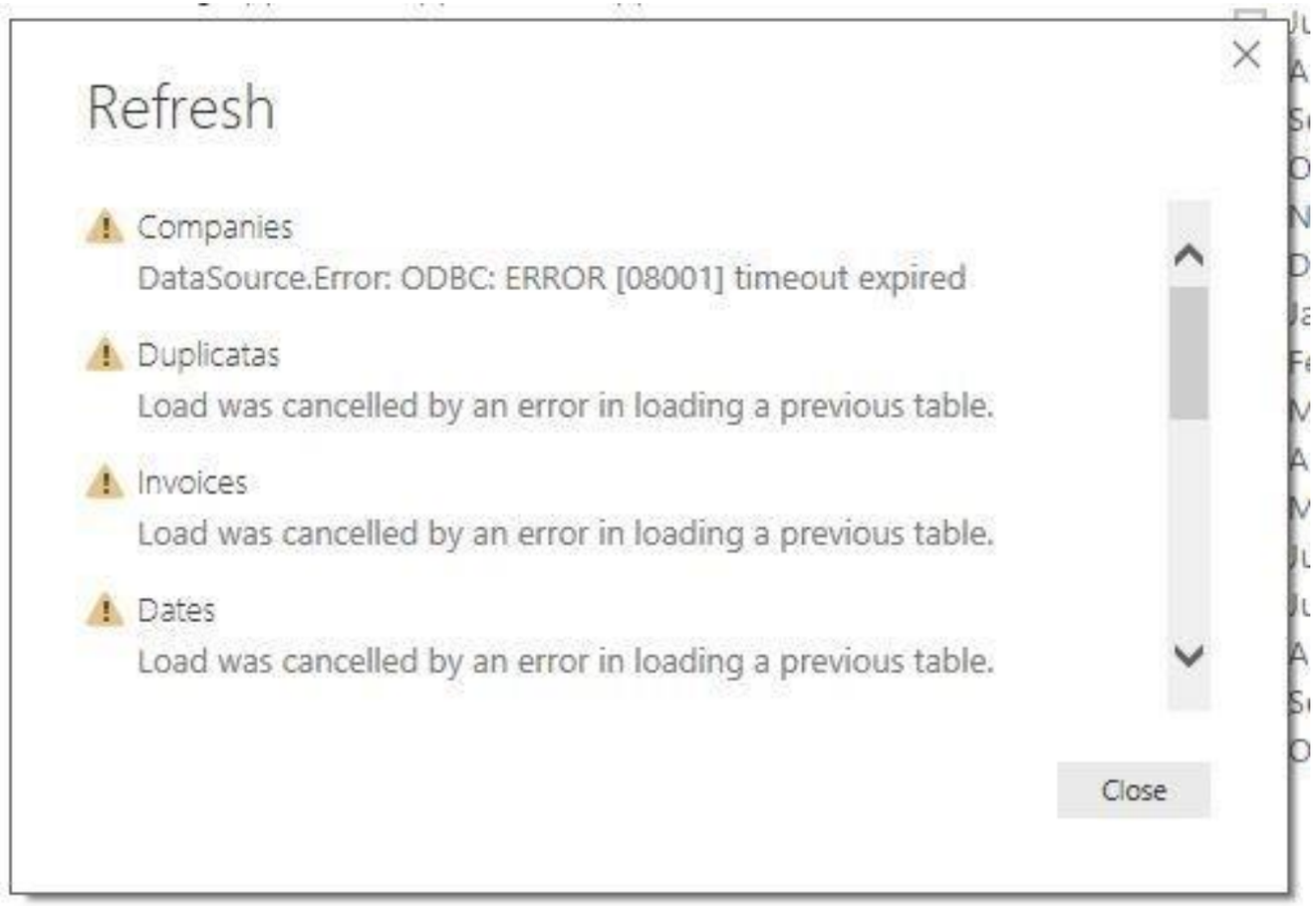
- Q01 – Which storage mode leaves the data at the data source?
- A01 – DirectQuery

- Q02 – Which technology improves performance by generating a single query statement to retrieve and transform source data?
- A02 – Query Folding

Lesson 3:
Resolve Data Errors

Identify and Resolve Data Import Errors

- You may encounter the following errors:
  - Query Timeout.
  - Couldn’t find data formatted as a table.
  - Could not find file.
  - Data type errors.



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Review Questions

- Q01 – What type of import error might leave a column blank?
- A01 – Data type error

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Module Overview

We covered the following concepts:

- Getting data from various data sources
- Optimizing Performance
- Resolving data errors

Lab: CONNECT TO DATA

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References

- DA-100 Prepare data for analysis

https://docs.microsoft.com/en-us/learn/modules/get-data/

- DA-100 Clean, Transform, and load data in Power BI

https://docs.microsoft.com/en-us/learn/modules/clean-data-power-bi/