

# Finding Information About Queries

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# Module Overview



**Data generated by SQL Server when a query executes**

**Where data exists and how to capture it**



# Information We Can Find About Query Execution

Query Text

Query Plan

Execution  
Statistics



# Information Generated by Query Execution



Can be viewed “live”

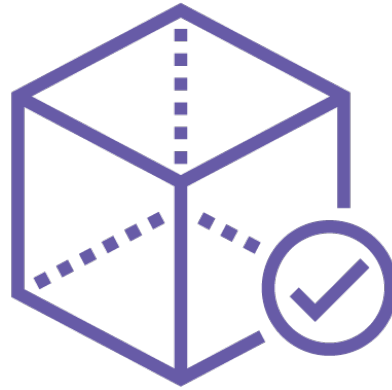


“Stored” information can be  
retrieved and reviewed

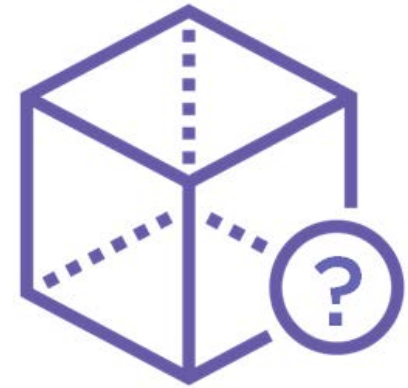
# Data From SSMS



I/O, CPU, Duration



Actual Plan



Estimated Plan



# Demo



## Viewing “Live” Query Execution Data



# Finding Query Execution Data

**SQL Server  
Management  
Studio**

**Extended  
Events/Trace**

**Dynamic  
Management  
Objects**

**Query Store**

**Performance  
Monitor**



# Extended Events



sql\_statement\_completed  
sp\_statement\_completed  
    rpc\_completed  
sql\_batch\_completed



query\_post\_compilation\_showplan  
query\_post\_execution\_showplan  
query\_pre\_execution\_showplan



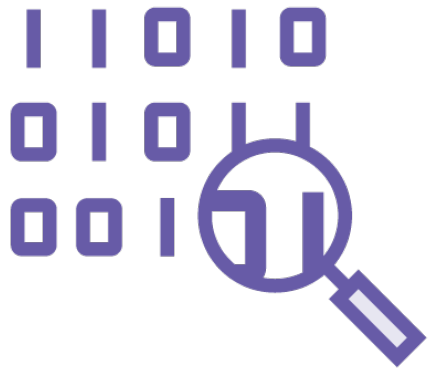
# Demo



## Query Information From Extended Events



# Dynamic Management Objects



`sys.dm_exec_sql_text`  
`sys.dm_exec_query_plan`  
`sys.dm_exec_cached_plans`  
`sys.dm_exec_text_query_plan`



`sys.dm_exec_query_stats`  
`sys.dm_exec_function_stats`

# Demo



## Query Execution Data in DMOs





## Query Store

- Captures query text
- Captures query plan
- Captures runtime statistics

## SQL Server: Introduction to Query Store

- <https://www.pluralsight.com/courses/sql-server-query-store-introduction>

# Performance Monitor

**CPU**

**Memory**

**Physical Disk**

**Access Methods**

**Locks**

**SQL Statistics**



# Demo



## Query Metrics From Performance Monitor



# A Note About Estimated and Actual Plans

## Estimated

Contains estimates only

Estimates are based on values used for the *first* execution of the query

SSMS, XE/trace, plan cache

## Actual

Contains estimates and actuals

Actuals based on input values used for *that* execution

SSMS and XE/trace

May be different than the estimated plan



# What We Covered



**Data generated by SQL Server when a query executes**

**Where data exists and how to capture it**

