

# Compare Estimated and Actual Query Plans and Related Metadata

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# Agenda



Estimated execution plan

Actual execution plan

Live query statistics

Analyze Execution Plan

Demos



“There is no such thing as **absolute** value in this world. You can only **estimate** what a thing is **worth** to you.”

Charles Dudley Warner



# What is an **estimated** execution plan?

The most probable plan the engine is likely to use when SQL Server generates an execution plan without running an actual query and display.





## Estimated execution plan

- Quicker
- No need to run actual query
- No execution data
- No available resource consideration
- Shortcut: CTRL + L
- `SET SHOWPLAN_ALL ON`
- `SET SHOWPLAN_XML ON`

# What is an **actual** execution plan?

When SQL Server generates an execution plan running an actual query, considering available resources.





## Actual execution plan

- Visible after query is executed
- Contains actual execution data
- Consider available resources
- Shortcut: CTRL + M
- `SET STATISTICS PROFILE ON`
- `SET STATISTICS XML ON`

# Demo



**Estimated Execution Plan**

**Actual Execution Plan**





# What is **live** query statistics?

The live query statistics displays the real-time insights into query execution process as well as control flows of the operator.





## Live query statistics

- Visible while query is executed
- Contains actual execution data
- Consider available resources
- Available from *Activity Monitor*

# Demo



## Live query statistics



# Analyze Execution Plan



**Show plan analysis**



**Compare showplan**



**Find node**



# Demo



Analyze execution plan



# Summary



While query performance troubleshooting it is critical to use different query plan tools to find the troublemaking operator

