

Execution Plans - Execution plan in MS SQL Server

The execution plan is created using the Query Optimizer with the help of statistics, the Algebrizer / process tree.

The execution plan is created using the **Query Optimizer** with the help of statistics, the **Algebrizer** / process **tree** . That's the **Query Optimizer** result and shows how your work is done.

There are 2 types of plans that are **Estimated** and **Actual** .

1. The estimated plan shows the most optimal view.
2. The actual plan shows what the query is and how it performs.

The execution plan is saved on the Plan Cache for reuse. Each plan is saved once unless the optimizer decides to perform parallel execution of the query.

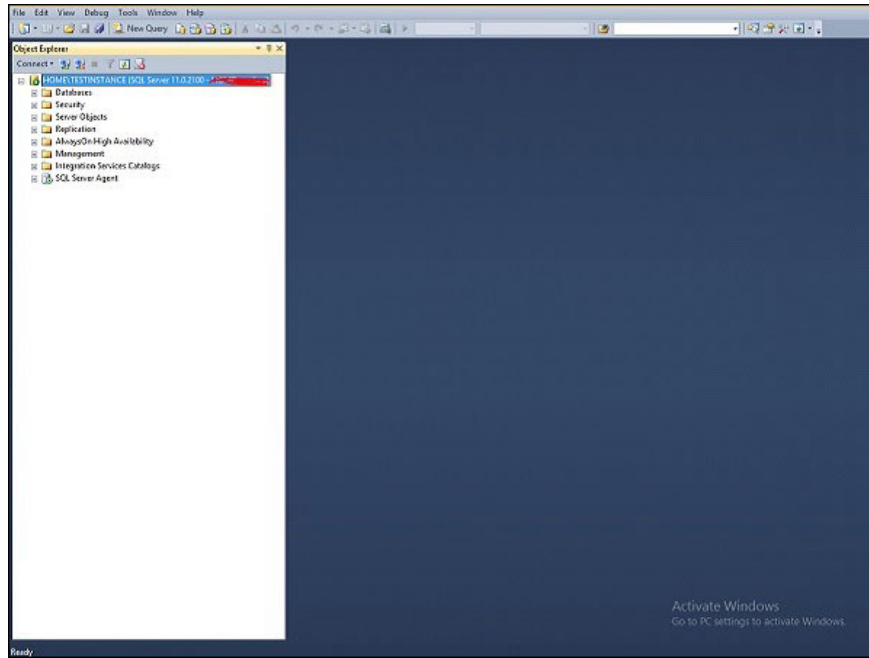
There are 3 execution plan formats in SQL Server - **Graphical Plan** , **Text Plan** and **XML Plan** (Marked language format).

SHOWPLAN is required (Permisson) required if users want to see the execution plan.

Example 1

Below is the process to see the estimated execution plan.

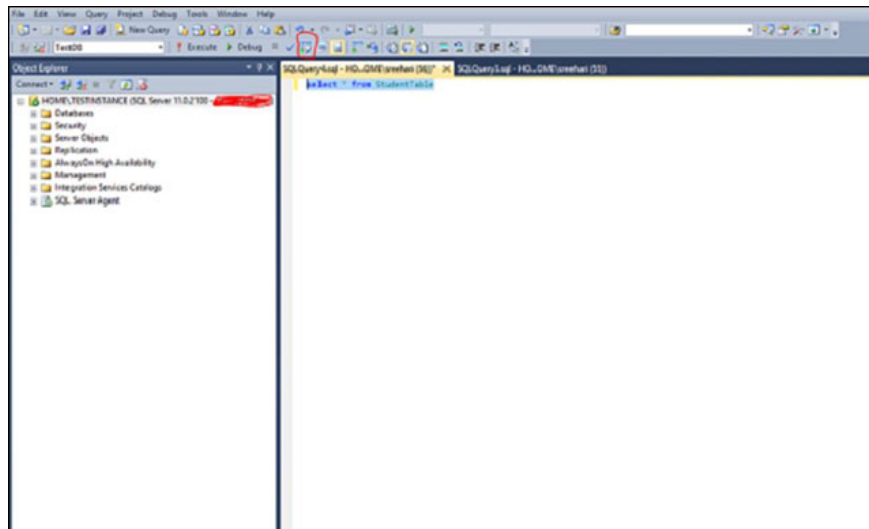
Step 1 - Connect to the SQL Server installation. In this case is *TESTINSTANCE* as shown in the picture below.



Open the SQL Server installation

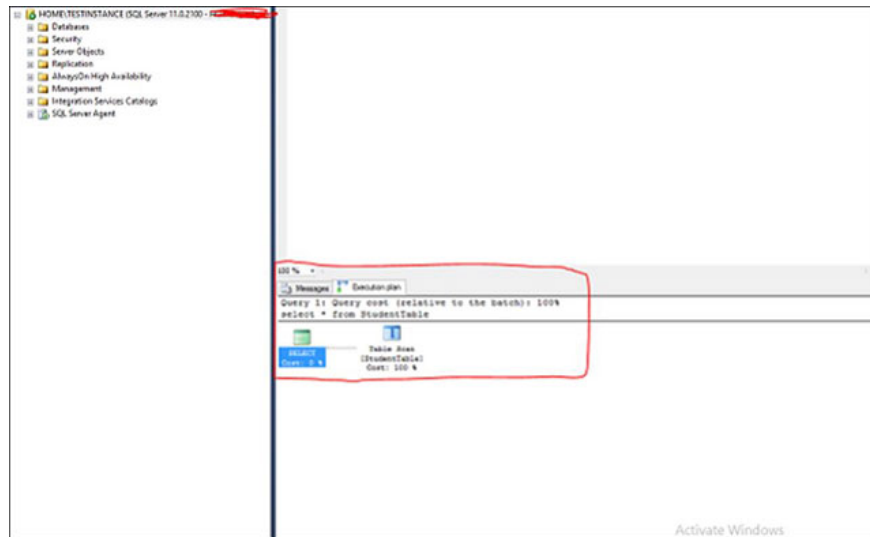
Step 2 - Select the database name (in this case *TestDB*) then click **New Query** and write the query below.

Select * from StudentTable



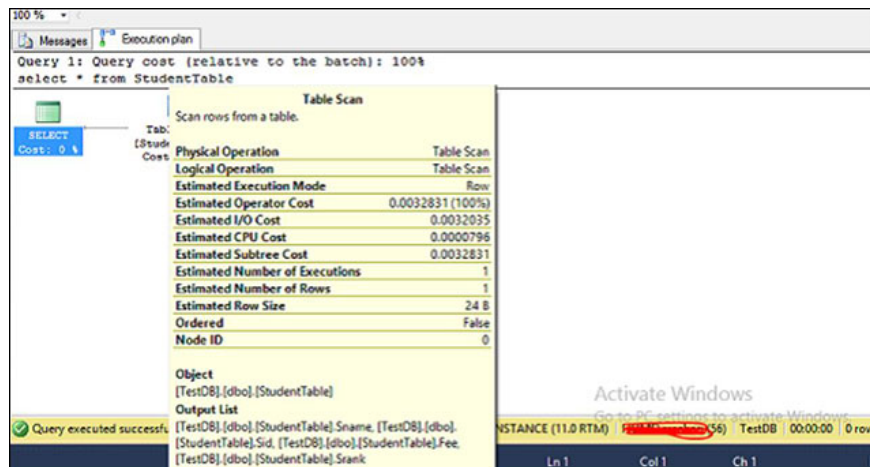
Write a new query

Step 3 - Click the red highlighted icon in the image above to open the estimated execution plan as shown below.



Estimated execution plan

Step 4 - Place the mouse pointer on the **Table Scan** (the second icon in the red frame of the image above) to see the detailed estimated execution plan. The screen below will appear.

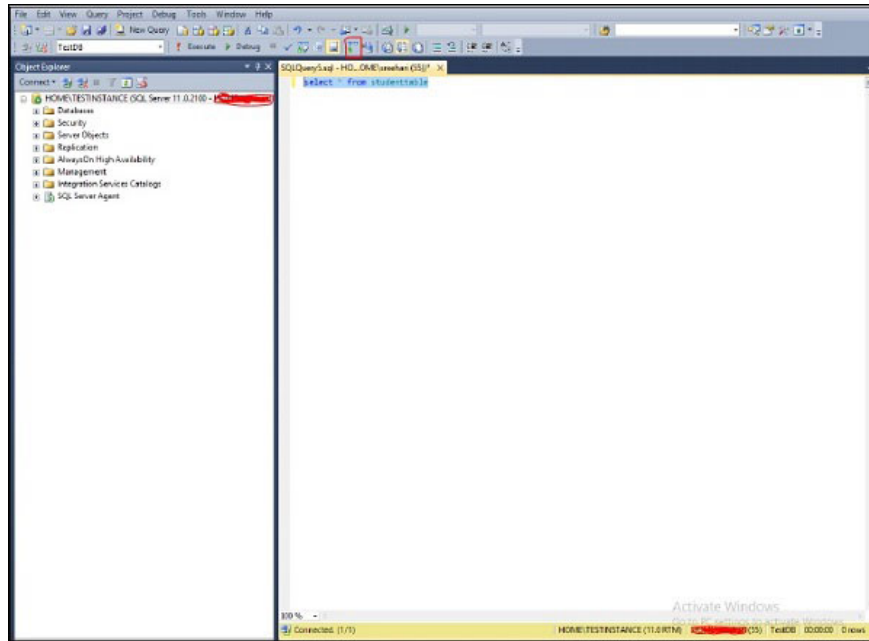


Detailed plan estimates

Example 2

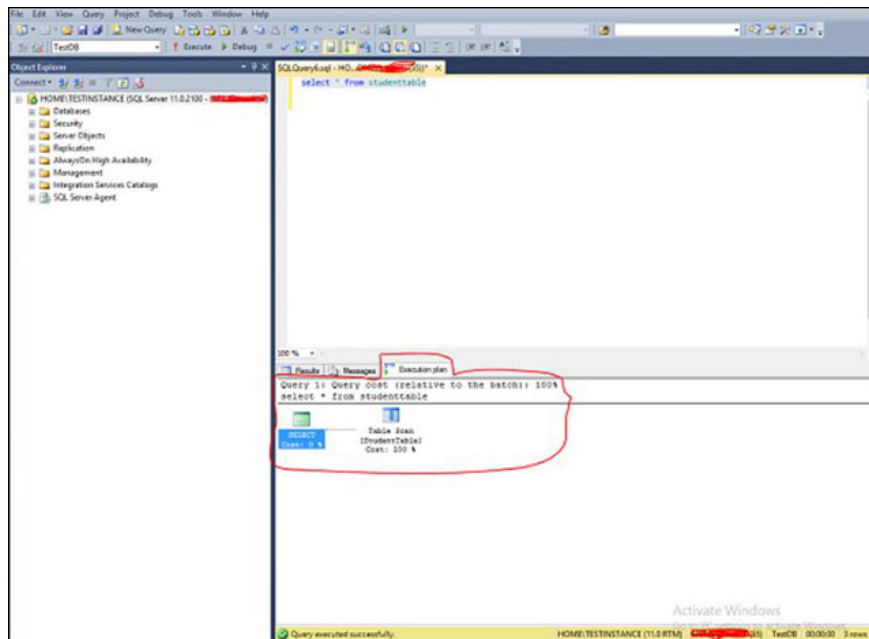
This is the process to see the actual execution plan

Step 1 and Step 2 as in example 1.



Create a new query to see the actual execution plan

Step 3 - Click the red circled icon in the image above to open the actual execution plan as shown below.



Actual execution plan in SQL Server

Step 4 - Place your mouse pointer on the **Table Scan** (the second icon in the red frame of the image above) to see a detailed implementation plan. The screen below will appear.

100 % -

Results Messages

Query 1: QUERY 008
select * from stud

SELECT
Cost: 0

Tab (Stud)
Cost

Table Scan
Scan rows from a table.

Physical Operation	Table Scan
Logical Operation	Table Scan
Actual Execution Mode	Row
Estimated Execution Mode	Row
Actual Number of Rows	2
Actual Number of Batches	0
Estimated I/O Cost	0.0032035
Estimated Operator Cost	0.0032831 (100%)
Estimated CPU Cost	0.0000796
Estimated Subtree Cost	0.0032831
Estimated Number of Executions	1
Number of Executions	1
Estimated Number of Rows	1
Estimated Row Size	24 B
Actual Rebinds	0
Actual Rewinds	0
Ordered	False
Node ID	0

Object
[TestDB].[dbo].[StudentTable]

Output List
[TestDB].[dbo].[StudentTable].Sname [TestDB].[dbo].[StudentTable].Sid, [TestDB].[dbo].[StudentTable].Fee
[TestDB].[dbo].[StudentTable].Srank

Query executed successfully

Activate Windows
Go to Settings to activate Windows

INSTANCE (11.0 RTM) 55 TestDB

Detailed execution plan

Step 5 - Finally click **Results** in the top left corner of the screen above.

Previous article: Reporting service in MS SQL Server

Next article: Integrated services in MS SQL Server

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