

Statistics IO Statistics TIME

```
use AdventureWorks2012;
go

-- DBCC DROPCLEANBUFFERS -curăță SQL Server data
-- DBCC FREEPROCCACHE -curăță procedure cache

DBCC DROPCLEANBUFFERS
DBCC FREEPROCCACHE
GO
SET STATISTICS IO ON
SET STATISTICS TIME ON
GO
SELECT * FROM Person.ContactType

-- CPU time -cantitatea de resurse CPU folosite pentru a executa interogarea
-- Elapsed time -cât durează pentru ca interogarea să se execute

-- physical reads -număr de pagini citite de pe disc
-- read-ahead reads -număr de pagini localizate în cache pentru interogare

-- Scan count -de câte ori tabelele au fost accesate (numărul de ori)
-- Logical reads -numărul de pagini citite din data cache
```

Results Messages			
	ContactTypeID	Name	ModifiedDate
1	1	Accounting Manager	2002-06-01 00:00:00.000
2	2	Assistant Sales Agent	2002-06-01 00:00:00.000
3	3	Assistant Sales Representative	2002-06-01 00:00:00.000
4	4	Coordinator Foreign Markets	2002-06-01 00:00:00.000
5	5	Export Administrator	2002-06-01 00:00:00.000
6	6	International Marketing Manager	2002-06-01 00:00:00.000
7	7	Marketing Assistant	2002-06-01 00:00:00.000
8	8	Marketing Manager	2002-06-01 00:00:00.000
9	9	Marketing Representative	2002-06-01 00:00:00.000
10	10	Order Administrator	2002-06-01 00:00:00.000
11	11	Owner	2002-06-01 00:00:00.000

Query executed successfully. DESKTOP-ATJN5FL\SQLEXPRESS ...

DBCC execution completed. If DBCC printed error messages, contact your system administrator.

DBCC execution completed. If DBCC printed error messages, contact your system administrator.

SQL Server parse and compile time:

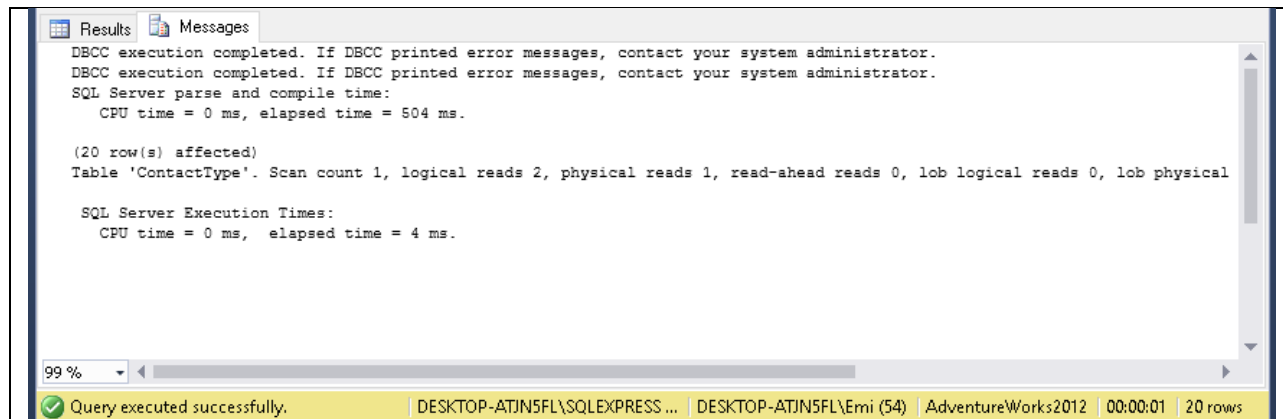
CPU time = 0 ms, elapsed time = 504 ms.

(20 row(s) affected)

Table 'ContactType'. Scan count 1, logical reads 2, physical reads 1, read-ahead reads 0, lob logical reads 0, lob physical reads 0, lob read-ahead reads 0.

SQL Server Execution Times:

CPU time = 0 ms, elapsed time = 4 ms.



USE AdventureWorks2012

GO

CREATE NONCLUSTERED INDEX IDX_firstname

ON Person.ContactType (Name ASC)

GO

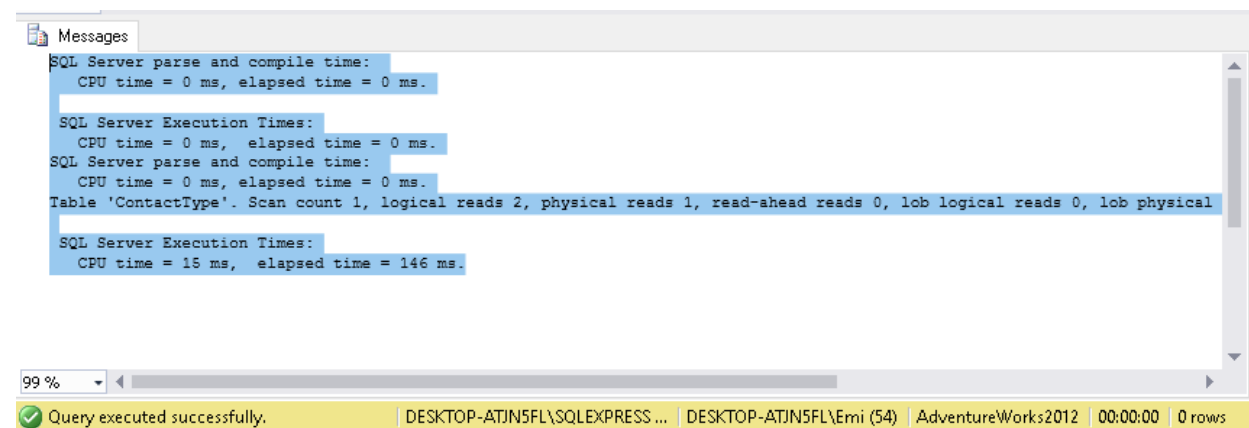
SQL Server parse and compile time:
 CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:
 CPU time = 0 ms, elapsed time = 0 ms.

SQL Server parse and compile time:
 CPU time = 0 ms, elapsed time = 0 ms.

Table 'ContactType'. Scan count 1, logical reads 2, physical reads 1, read-ahead reads 0, lob logical reads 0, lob physical reads 0, lob read-ahead reads 0.

SQL Server Execution Times:
 CPU time = 15 ms, elapsed time = 146 ms.



SHOWPLAN ALL

SET SHOWPLAN_ALL ON

GO

SELECT count(*) cRows

FROM HumanResources.Shift

```
GO
SET SHOWPLAN_ALL OFF
GO
```

Results Messages

	StmtText	StmtId	NodeId	Parent	PhysicalOp	LogicalOp	Argument
1	SELECT count(*) cRows FROM HumanResources.Shift	1	1	0	NULL	NULL	1
2	[-Compute Scalar(DEFINE:([Expr1002]=CONVERT_IM...	1	2	1	Compute Scalar	Compute Scalar	DEFINE:([Expr1002]=CONVERT_IMPLICIT(int,[Expr100...
3	[-Stream Aggregate(DEFINE:([Expr1003]=Count("))	1	3	2	Stream Aggregate	Aggregate	NULL
4	[-Index Scan(OBJECT:([AdventureWorks2012].[...	1	4	3	Index Scan	Index Scan	OBJECT:([AdventureWorks2012].[HumanResources].[S...

ts Messages

DefinedValues	EstimateRows	EstimateIO	EstimateCPU	AvgRowSize	TotalSubtreeCost	OutputList	Warnings	Type	Parallel	EstimateExecutions
NULL	1	NULL	NULL	NULL	0.0032876	NULL	NULL	SELECT	0	NULL
[Expr1002]=CONVERT_IMPLICIT(int,[Expr1003],0)	1	0	0	11	0.0032876	[Expr1002]	NULL	PLAN_ROW	0	1
[Expr1003]=Count(*)	1	0	2.3E-06	11	0.0032876	[Expr1003]	NULL	PLAN_ROW	0	1
NULL	3	0.003125	0.0001603	9	0.0032853	NULL	NULL	PLAN_ROW	0	1

Graphical execution plan

-- Graphical execution plan

```
USE AdventureWorks2012
GO
SELECT Count(*) cRows
FROM HumanResources.Shift
GO
```

12 (DESKTOP-ATJN5FL\Emi (54)) - Microsoft SQL Server
Help

15FL\Emi (54))
Include Live Query Statistics

Results	Messages	Live Query Statistics
Estimated query progress:100%	Query 1: Query cost (relative to the batch): 100% SELECT Count(*) cRows FROM HumanResources.Shift	

SELECT

Compute Scalar

1 of 1 (100%)

Stream Aggregate (Aggregate)

1 of 1 (100%)

Index Scan (NonClustered)

[Shift].[AK_Shift_StartTime_EndTime]

3 of 3 (100%)

Messages:

SQL Server parse and compile time:
CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:
CPU time = 0 ms, elapsed time = 0 ms.

```

SQL Server Execution Times:
  CPU time = 0 ms,  elapsed time = 0 ms.
SQL Server parse and compile time:
  CPU time = 0 ms,  elapsed time = 0 ms.

SQL Server Execution Times:
  CPU time = 0 ms,  elapsed time = 0 ms.
SQL Server parse and compile time:
  CPU time = 0 ms,  elapsed time = 1 ms.

(1 row(s) affected)
Table 'Shift'. Scan count 1, logical reads 2, physical reads 1, read-ahead reads 0, lob
logical reads 0, lob physical reads 0, lob read-ahead reads 0.

(4 row(s) affected)

(1 row(s) affected)

SQL Server Execution Times:
  CPU time = 0 ms,  elapsed time = 16 ms.
SQL Server parse and compile time:
  CPU time = 0 ms,  elapsed time = 0 ms.

SQL Server Execution Times:
  CPU time = 0 ms,  elapsed time = 0 ms.

SQL Server Execution Times:
  CPU time = 0 ms,  elapsed time = 0 ms.

```

Results		Messages	Live Query Statistics
	cRows		
1	3		

```

SELECT c.CustomerID, SUM(LineTotal)
FROM Sales.SalesOrderDetail od
JOIN Sales.SalesOrderHeader oh ON od.SalesOrderID=oh.SalesOrderID
JOIN Sales.Customer c ON oh.CustomerID=c.CustomerID
GROUP BY c.CustomerID

```

	CustomerID	(No column name)
1	14324	5121.428200
2	22814	4.990000
3	11407	53.990000
4	28387	583.970000
5	19897	596.960000
6	15675	7206.380000
7	24165	3046.840000
8	27036	7.280000
9	18546	29.480000
10	11453	8176.980000
11	17195	3330.667500

Query executed successfully. | DESKTOP-ATJ

Messages:

SQL Server parse and compile time:

CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:

CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:

CPU time = 0 ms, elapsed time = 0 ms.

SQL Server parse and compile time:

CPU time = 31 ms, elapsed time = 266 ms.

(19119 row(s) affected)

Table 'Worktable'. Scan count 0, logical reads 0, physical reads 0, read-ahead reads 0, lob logical reads 0, lob physical reads 0, lob read-ahead reads 0.

Table 'Workfile'. Scan count 0, logical reads 0, physical reads 0, read-ahead reads 0, lob logical reads 0, lob physical reads 0, lob read-ahead reads 0.

Table 'SalesOrderDetail'. Scan count 1, logical reads 1246, physical reads 3, read-ahead reads 1242, lob logical reads 0, lob physical reads 0, lob read-ahead reads 0.

Table 'SalesOrderHeader'. Scan count 1, logical reads 57, physical reads 1, read-ahead reads 55, lob logical reads 0, lob physical reads 0, lob read-ahead reads 0.

Table 'Customer'. Scan count 1, logical reads 123, physical reads 1, read-ahead reads 121, lob logical reads 0, lob physical reads 0, lob read-ahead reads 0.

(9 row(s) affected)

(1 row(s) affected)

SQL Server Execution Times:

CPU time = 407 ms, elapsed time = 867 ms.

SQL Server parse and compile time:

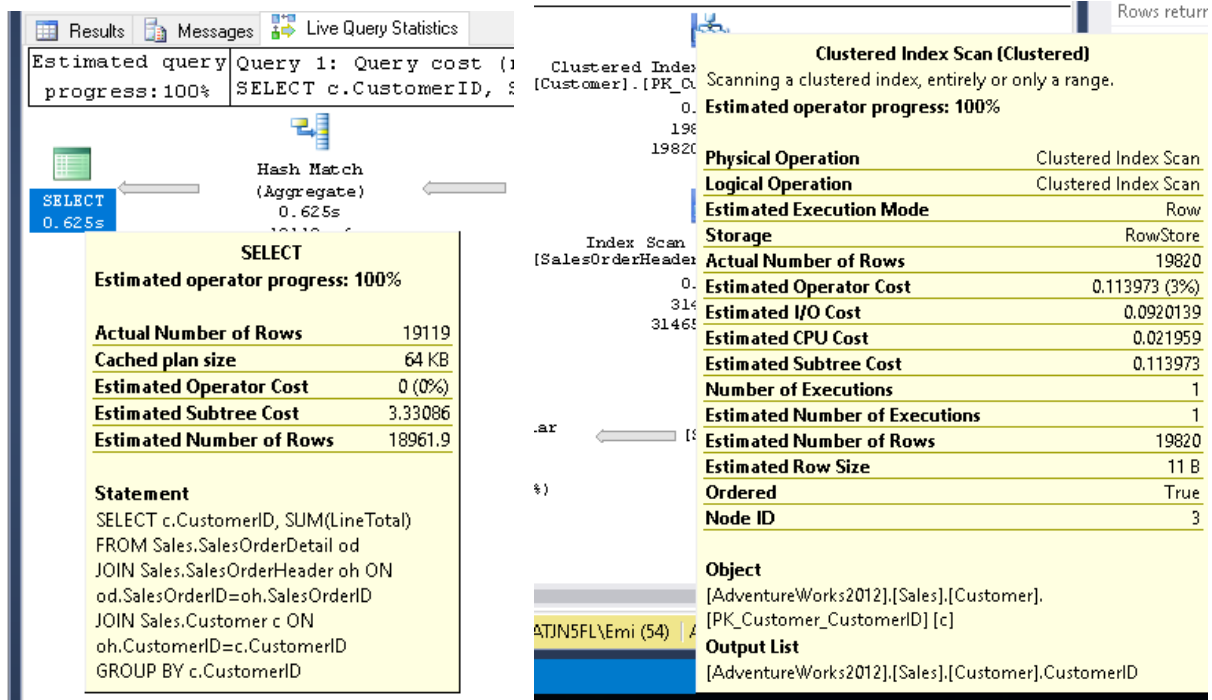
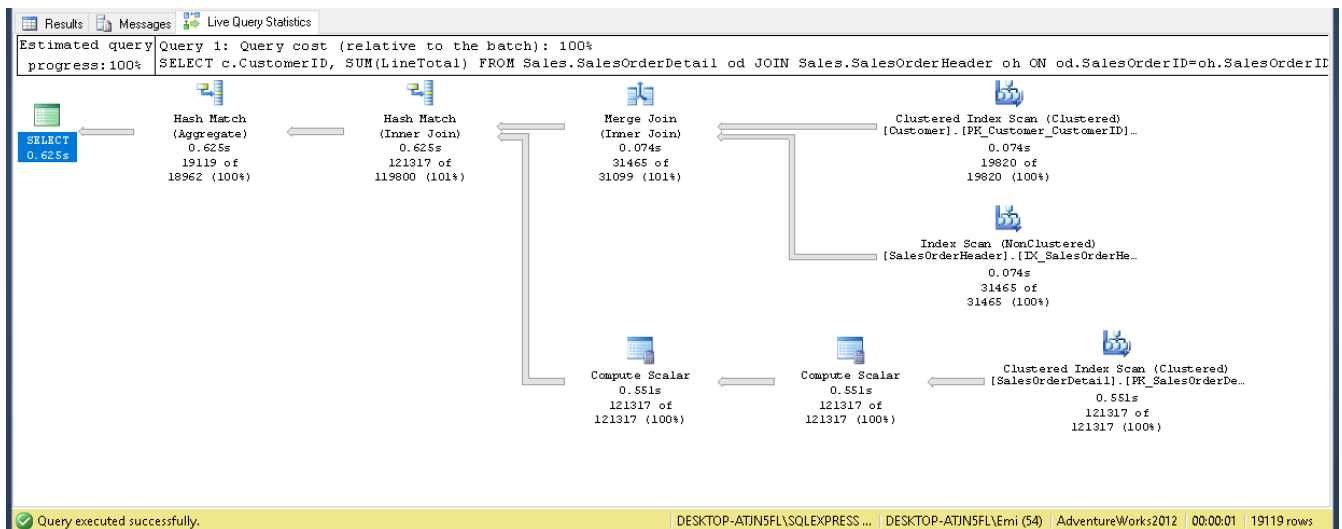
CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:

CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:

CPU time = 0 ms, elapsed time = 0 ms.



```
SELECT oh.CustomerID, SUM(LineTotal)
FROM Sales.SalesOrderDetail od
JOIN Sales.SalesOrderHeader oh ON od.SalesOrderID=oh.SalesOrderID
GROUP BY oh.CustomerID
```

Messages:

SQL Server parse and compile time:
 CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:
 CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:

CPU time = 0 ms, elapsed time = 0 ms.
SQL Server parse and compile time:
CPU time = 15 ms, elapsed time = 197 ms.

(19119 row(s) affected)

Table 'Worktable'. Scan count 0, logical reads 0, physical reads 0, read-ahead reads 0, lob logical reads 0, lob physical reads 0, lob read-ahead reads 0.

Table 'Workfile'. Scan count 0, logical reads 0, physical reads 0, read-ahead reads 0, lob logical reads 0, lob physical reads 0, lob read-ahead reads 0.

Table 'SalesOrderDetail'. Scan count 1, logical reads 1246, physical reads 2, read-ahead reads 1157, lob logical reads 0, lob physical reads 0, lob read-ahead reads 0.

Table 'SalesOrderHeader'. Scan count 1, logical reads 689, physical reads 3, read-ahead reads 685, lob logical reads 0, lob physical reads 0, lob read-ahead reads 0.

(7 row(s) affected)

(1 row(s) affected)

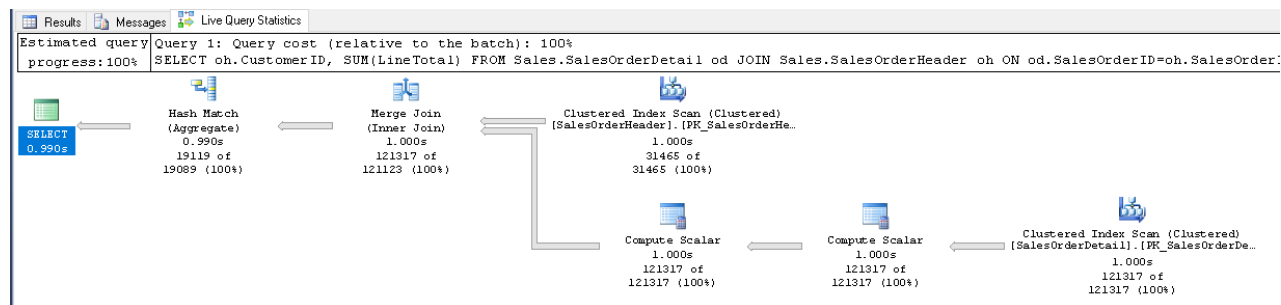
SQL Server Execution Times:
CPU time = 313 ms, elapsed time = 1124 ms.
SQL Server parse and compile time:
CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:
CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:
CPU time = 0 ms, elapsed time = 0 ms.

Results		Messages	Live Query Statistics
	CustomerID	(No column name)	
1	14324	5121.428200	
2	22814	4.990000	
3	11407	53.990000	
4	28387	583.970000	
5	19897	596.960000	
6	15675	7206.380000	
7	24165	3046.840000	
8	27036	7.280000	
9	18546	29.480000	
10	11453	8176.980000	
11	17195	3330.667500	
12	17026	261.390000	
13	22768	600.460000	
14	28433	32.600000	
15	27082	782.990000	
16	15844	3134.950000	
17	12758	74.980000	

✓ Query executed successfully.



```
CREATE INDEX IDX_OrderDetail_OrderID_TotalLine
ON Sales.SalesOrderDetail(SalesOrderID)
INCLUDE (LineTotal)
```

Messages:

SQL Server parse and compile time:
 CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:
 CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:
 CPU time = 0 ms, elapsed time = 0 ms.

SQL Server parse and compile time:
 CPU time = 0 ms, elapsed time = 0 ms.

Table 'SalesOrderDetail'. Scan count 1, logical reads 1246, physical reads 2, read-ahead reads 834, lob logical reads 0, lob physical reads 0, lob read-ahead reads 0.

SQL Server Execution Times:
 CPU time = 343 ms, elapsed time = 883 ms.

SQL Server parse and compile time:
 CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:
 CPU time = 0 ms, elapsed time = 0 ms.

SQL Server Execution Times:
 CPU time = 0 ms, elapsed time = 0 ms.

