

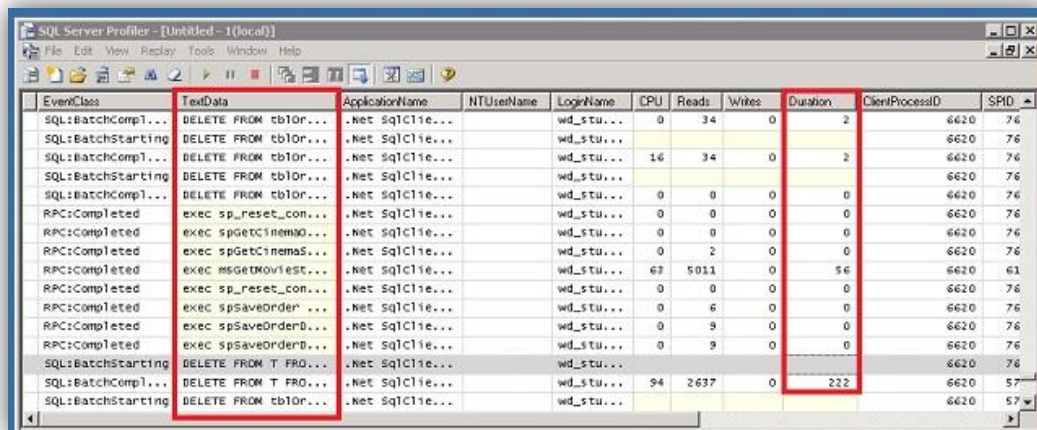
## CAPTURE AND DISPLAY EXECUTION TIME OF SQL QUERY IN SQL SERVER

This tutorial proposes 3 ways in order for you to get the **Execution time** of SQL Query or Stored Procedures are called or submitted to your SQL Server.

They will give you **durations in microseconds** and base on the execution time, you may have a deeper understand and will do some optimization for your database structure/indexing to make it runs better.

### 1. USING SQL SERVER PROFILER

I think it's a easiest way for you to trace/track which Stored Procedures or SQL commands are running on SQL Server and how long it takes for each of **SQL Query/ Stored Procedure** execution.



EventClass	TextData	ApplicationName	NTUserName	LogName	CPU	Reads	Writes	Duration	ClientProcessID	SPID
SQL:BatchCompl...	DELETE FROM tblOr...	.Net sqlClie...		wd_stu...	0	34	0	2	6620	76
SQL:BatchStarting	DELETE FROM tblOr...	.Net sqlClie...		wd_stu...					6620	76
SQL:BatchCompl...	DELETE FROM tblOr...	.Net sqlClie...		wd_stu...	16	34	0	2	6620	76
SQL:BatchStarting	DELETE FROM tblOr...	.Net sqlClie...		wd_stu...					6620	76
SQL:BatchCompl...	DELETE FROM tblOr...	.Net sqlClie...		wd_stu...	0	0	0	0	6620	76
RPC:Completed	exec sp_reset_con...	.Net sqlClie...		wd_stu...	0	0	0	0	6620	76
RPC:Completed	exec spGetCinemaQ...	.Net sqlClie...		wd_stu...	0	0	0	0	6620	76
RPC:Completed	exec spGetCinemaS...	.Net sqlClie...		wd_stu...	0	2	0	0	6620	76
RPC:Completed	exec msGetMovieST...	.Net sqlClie...		wd_stu...	67	5011	0	56	6620	61
RPC:Completed	exec sp_reset_con...	.Net sqlClie...		wd_stu...	0	0	0	0	6620	76
RPC:Completed	exec spsaveorder ...	.Net sqlClie...		wd_stu...	0	6	0	0	6620	76
RPC:Completed	exec spsaveorderD...	.Net sqlClie...		wd_stu...	0	9	0	0	6620	76
RPC:Completed	exec spsaveorderD...	.Net sqlClie...		wd_stu...	0	9	0	0	6620	76
SQL:BatchStarting	DELETE FROM T FRO...	.Net sqlClie...		wd_stu...					6620	76
SQL:BatchCompl...	DELETE FROM T FRO...	.Net sqlClie...		wd_stu...	94	2637	0	222	6620	57
SQL:BatchStarting	DELETE FROM tblOr...	.Net sqlClie...		wd_stu...					6620	57

As you see, all commands are in **TextData** column and all Execution time for each are in **Duration**column respectively.

### 2. USING SQL SCRIPT WITH @STARTTIME AND @ENDTIME PARAMETERS

The script should be run on **SQL Server Management Studio Query**.

```
USE AdventureworksDW;
GO

DECLARE @StartTime datetime,@EndTime datetime

SELECT @StartTime=GETDATE()

SELECT * FROM DimCustomer where Gender = 'M'

SELECT @EndTime=GETDATE()

SELECT DATEDIFF(ms,@StartTime,@EndTime) AS [Duration in microseconds]
```

Just replace your own SQL statements with line 2, after execute the statement, it will show the **Duration in microseconds** in another result panel.

```
USE AdventureWorksDW;
GO

DECLARE @StartTime datetime,@EndTime datetime

SELECT @StartTime=GETDATE()

SELECT * FROM DimCustomer where Gender = 'M'

SELECT @EndTime=GETDATE()

SELECT DATEDIFF(ms,@StartTime,@EndTime) AS [Duration in millisecs]
```

	CustomerKey	GeographyKey	CustomerAlternateKey	Title	FirstName	MiddleName	LastName	NameStyle
1	11000	26	AW00011000	NULL	Jon	V	Yang	0
2	11001	37	AW00011001	NULL	Eugene	L	Huang	0
3	11002	31	AW00011002	NULL	Ruben	NULL	Torres	0
4	11005	22	AW00011005	NULL	Julio	NULL	Ruiz	0
5	11007	40	AW00011007	NULL	Marco	NULL	Mehta	0
6	11009	25	AW00011009	NULL	Shannon	C	Carlson	0
7	11011	22	AW00011011	NULL	Curtis	NULL	Lu	0

	Duration in millisecs
1	466

### 3. USING SQL SCRIPT WITH SET STATISTICS TIME (TRANSACT-SQL)

It displays the number of milliseconds required to parse, compile, and execute each statement.

Run this SQL script on your SQL Query:

```
USE AdventureworksDW;

GO

SET STATISTICS TIME ON

GO

SELECT * FROM DimCustomer where Gender = 'M'

GO

SET STATISTICS TIME OFF;

GO
```

And below is the result set:

SQL Server parse and compile time:

CPU time = 0 ms, elapsed time = 1 ms.

SQL Server parse and compile time:

CPU time = 0 ms, elapsed time = 1 ms.

(9351 row(s) affected)

SQL Server Execution Times:

CPU time = 63 ms, elapsed time = 479 ms.

SQL Server parse and compile time:

CPU time = 0 ms, elapsed time = 1 ms.

EventClass	TextData	ApplicationName	NTUserName	LoginName	CPU	Reads	Writes	Duration	ClientProcessID	SPID
SQL:BatchComp1...	DELETE FROM tblDr...	.Net SqlClie...		wd_stu...	0	34	0	2	6620	76
SQL:BatchStarting	DELETE FROM tblDr...	.Net SqlClie...		wd_stu...					6620	76
SQL:BatchComp1...	DELETE FROM tblDr...	.Net SqlClie...		wd_stu...	16	34	0	2	6620	76
SQL:BatchStarting	DELETE FROM tblDr...	.Net SqlClie...		wd_stu...					6620	76
SQL:BatchComp1...	DELETE FROM tblDr...	.Net SqlClie...		wd_stu...	0	0	0	0	6620	76
RPC:Completed	exec sp_reset_con...	.Net SqlClie...		wd_stu...	0	0	0	0	6620	76
RPC:Completed	exec spGetCinemaS...	.Net SqlClie...		wd_stu...	0	0	0	0	6620	76
RPC:Completed	exec spGetCinemaS...	.Net SqlClie...		wd_stu...	0	2	0	0	6620	76
RPC:Completed	exec msGetMovieEst...	.Net SqlClie...		wd_stu...	67	5011	0	56	6620	61
RPC:Completed	exec sp_reset_con...	.Net SqlClie...		wd_stu...	0	0	0	0	6620	76
RPC:Completed	exec sp_saveOrder ...	.Net SqlClie...		wd_stu...	0	6	0	0	6620	76
RPC:Completed	exec spSaveOrderB...	.Net SqlClie...		wd_stu...	0	9	0	0	6620	76
RPC:Completed	exec spSaveOrderD...	.Net SqlClie...		wd_stu...	0	9	0	0	6620	76
SQL:BatchStarting	DELETE FROM T PRO...	.Net SqlClie...		wd_stu...					6620	76
SQL:BatchComp1...	DELETE FROM T PRO...	.Net SqlClie...		wd_stu...	94	2637	0	222	6620	57
SQL:BatchStarting	DELETE FROM tblDr...	.Net SqlClie...		wd_stu...					6620	57

That's all! Feel free to contribute your own solution by submitting your comments as you are always be welcome.