Performance Tuning Report
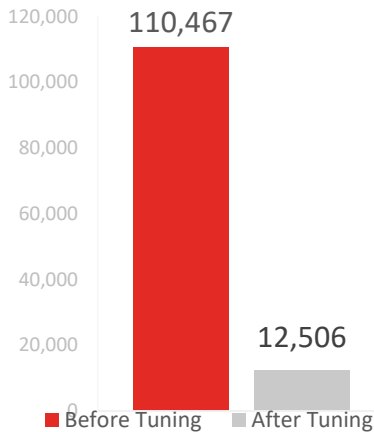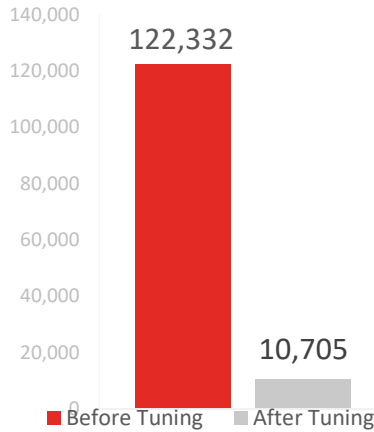

CPU

CPU is 9X
times faster

OR

883%

CPU improvement

Speed

Speed is 11X
times faster

OR

1,143%

Speed improvement
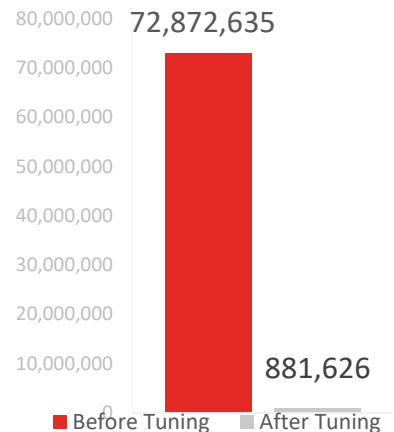
Disk

Disk is 83X
times faster

OR

8,266%

Disk improvement

Description:

To improve this stored procedure, four views were created, there of which are indexes. Some stored proc code changes were made too. Removed few tables from EXISTS operator that were part of the LEFT JOIN.

If you want your SQL Server to go faster, let us know! We would love to have you as a client!

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EventClass	TextData		CPU	Reads	Writes	Duration
Trace Start						
SQL:BatchCompleted	SELECT dtb.name AS [Name], dtb.database_id AS		16	5	0	
SQL:BatchCompleted	spBonus 'march 2016'		110467	72872635	250464	122
Trace Pause						
Trace Start						
SQL:BatchCompleted	PRINT'Test version'		0	0	0	
SQL:BatchCompleted	spBonus N'march 2016'		12906	881626	289	10
Trace Stop						

Performance gains are very significant

CPU was 110,467, now 12,506 = 89% less CPU usage than before.
Reads were 72,872,635 now 881,626 = 98% less reads than before.
Writes were 250,464 now 289 = 99.9% less writes than before.
Duration was 122,332 now 10,705 = 92% faster than before.

Validated this test version returns correct output and implement.

Technical Background:

Most SQL Servers bottleneck on Disk access (or disk "reads").

It's not CPU or RAM – which most customers often suspect first.

And that makes a lot of sense. Here is why.

Inefficient queries scan (or read) lot of data. Data read in is stored in RAM. As more data is read in, "older" data is pushed out from RAM. If there isn't enough RAM to keep ALL data in memory (which is often not possible), SQL Server has to read from disk – and that is the slowest operation SQL Server can do.

When query can be tuned to read 10 rows vs 10M – less CPU and RAM automatically are necessary. Therefore, tuning for less disk "reads" is often the primary goal.

To the end user nothing is more important than Speed (or Duration of the query) though.

Tuning to reduce CPU/RAM resources are helpful too.

When queries are tuned to need less CPU & RAM, it means that same server now has more capacity. Which means that same server can process double or triple the load. Which means it extends lifespan of the same server. Which means hardware upgrades can be pushed out further into the future.