

Tune the query, not the plan

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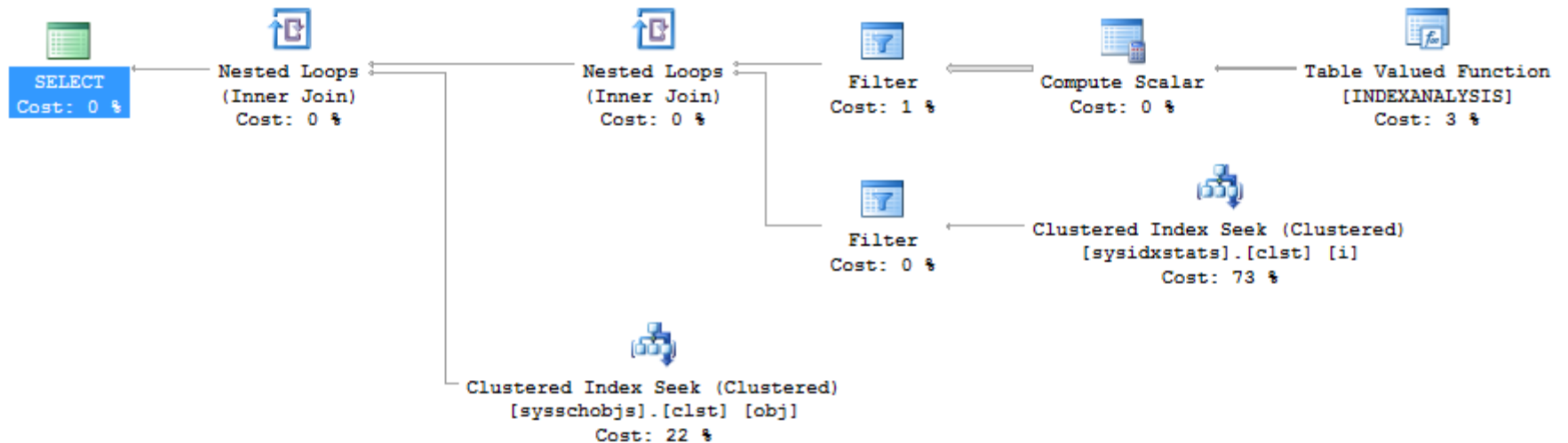
Data Platform



Execution plans

- Generated by Query Optimizer
 - Cardinality Estimator
 - Statistics
 - YOUR design
- How SQL will execute the query
 - Table access
 - What order
 - Join algorithm
- VERY useful in performance tuning

Execution plan



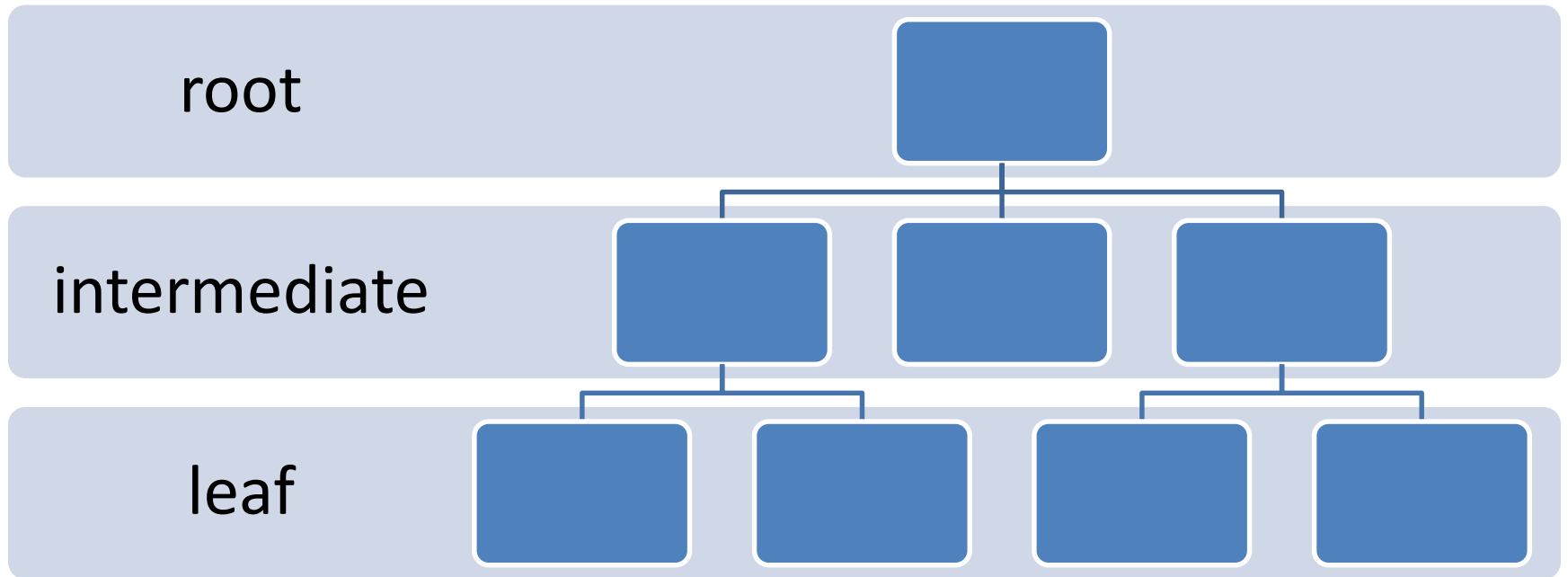
So what's the problem?

- DBA firefighting
- Looking for quick wins
- Focus on 'bad' operators
 - Table Scans
 - Scan operations in general (prefer seek)
 - Sort

DEMO

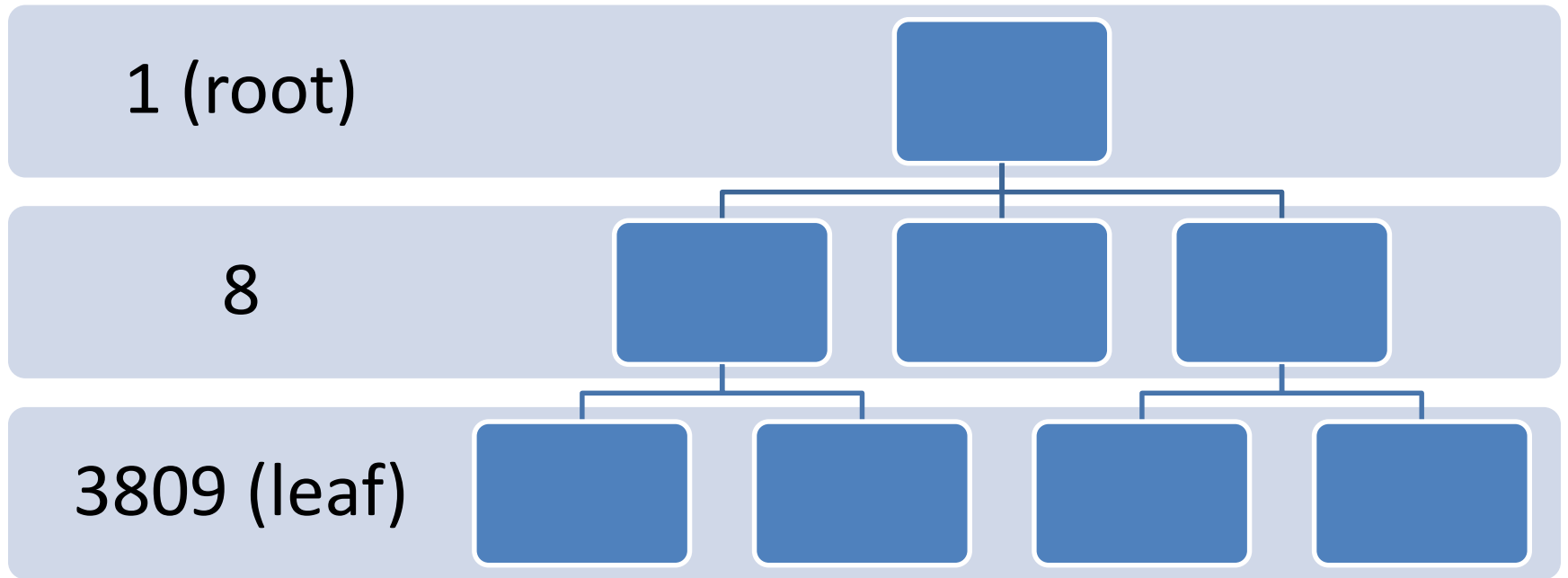
Evil Table Scans

Index structure



Person.Person

PK_Person_BusinessEntityID



=====

3818

DEMO

Evil Scans (in general)

So which operators then?



Warnings



Memory

- SpillToTempDb
- Wait
- **SortSpillDetails** - new 2016 (2012sp3 2014sp2)
- **HashSpillDetails** - new 2016 (2012sp3 2014sp2)

Warnings



Indexes

- PlanAffectingConvert
 - Cardinality Estimate
 - Seek Plan
- UnmatchedIndexes - Filtered Indexes

Warnings



- ColumnsWithNoStatistics
- NoJoinPredicate
- SpatialGuess
- FullUpdateForOnlineIndexBuild

Further Resources

- Redgate SQL Monitor v6



- SentryOne Plan Explorer
FREE!



- SQL Server Execution Plans
– Grant Fritchey



Allocation order scans

- <https://sqlperformance.com/2015/01/t-sql-queries/allocation-order-scans>
- <https://blogs.msdn.microsoft.com/sqlserverstorageengine/2006/11/08/when-can-allocation-order-scans-be-used/>
- <http://www.queryprocessor.com/nolock-and-top-optimization/>

Thanks for listening



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