

Refactoring Queries for Improved Performance



@bertwagner



bertwagner.com



youtube.com/bertwagner



bert@bertwagner.com



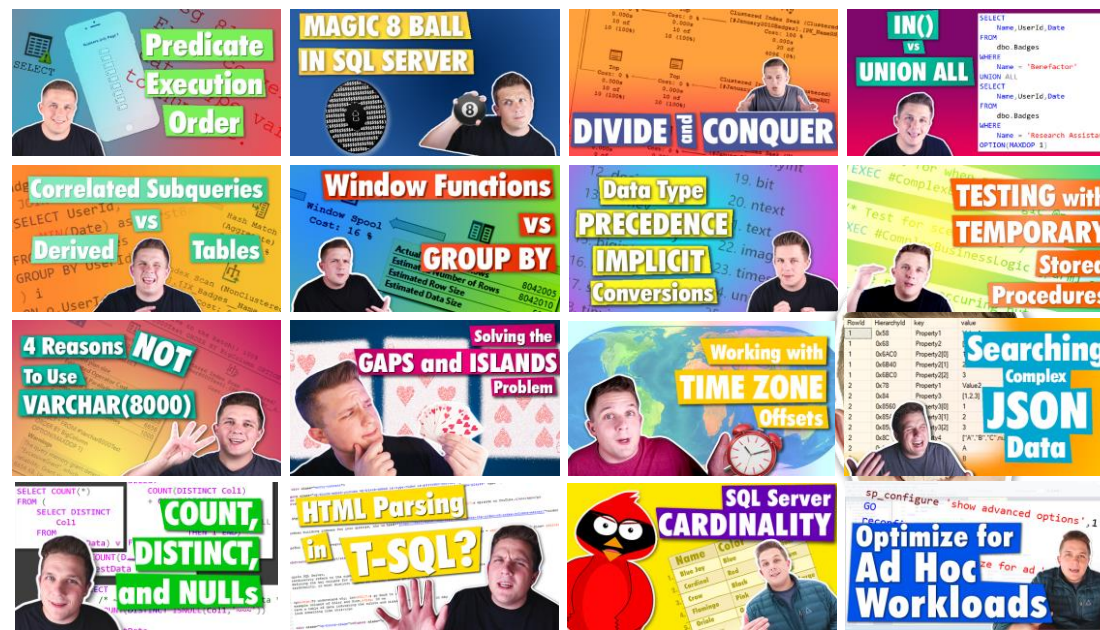
3 Techniques for Performance Tuning

- Server/Database Settings
- Index Modifications
- Query Refactoring

Bert Wagner

- Developer
- YouTuber and Blogger
- <https://BertWagner.com>
- bert@bertwagner.com
- Slides: bertwagner.com/rewrites

SQL WITH BERT



@bertwagner



bertwagner.com



youtube.com/bertwagner



bert@bertwagner.com

You Can't Always Get What You Want

- Vendor databases
- “Fragile” systems
- Not enough disk space
- Old hardware
- Limited tooling/ad hoc analysis
- Features limited by security software



Agenda

- Optimizer Woes
- Query Hints and Trace Flags
- Coercing the Optimizer Demos

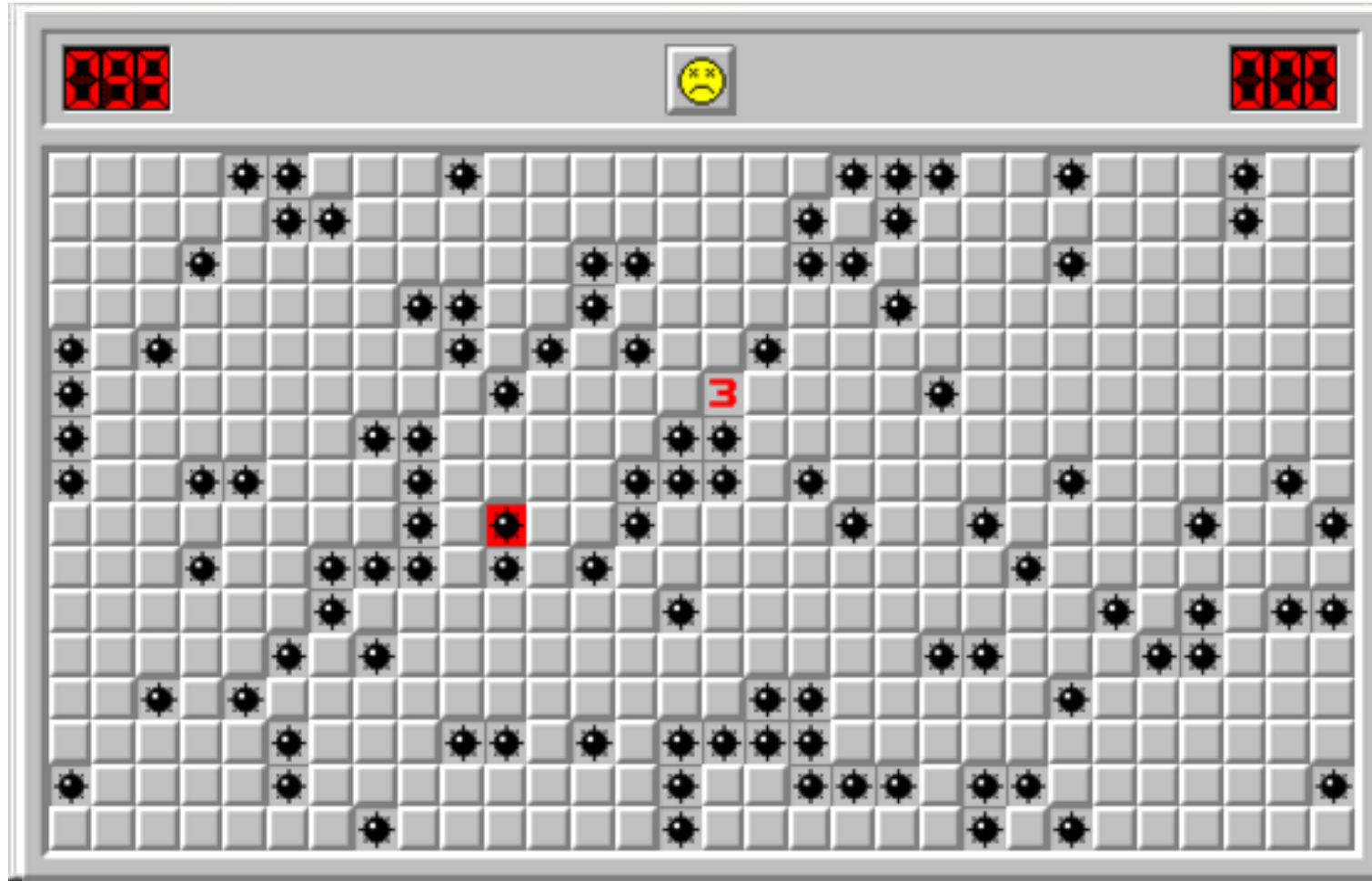


Optimizer Woes

- SQL is a declarative language
- The optimizer works on assumptions and data
 - If either of those are inadequate, it will generate poor performing plans
- Always best to solve the root cause...but sometimes you can't
- Some queries are just too complicated



Query Hints and Trace Flags



Demos

- Window Functions vs. GROUP BY
- Correlated Subqueries vs Derived Tables
- IN vs UNION ALL
- Temporary Staging Tables
- Forcing JOIN Orders
- Finding DISTINCT Values



And that's not all!

- Convert UDFs to Inline logic
- Putting code in scalar functions to make it run serially
- [DISTINCT vs GROUP BY](#)
- [NOT IN vs NOT EXISTS](#)
- Data Compression
- Materialized Views
- Change cardinality estimator
- Copy the data somewhere that you can index
- ... and more



Thank you!

SQL WITH BERT

New Episodes Every
Tuesday



[@bertwagner](https://twitter.com/bertwagner)



bertwagner.com



youtube.com/bertwagner



bert@bertwagner.com

← New posts and videos
every Tuesday!



@bertwagner



bertwagner.com



youtube.com/bertwagner



bert@bertwagner.com