



**BRENT OZAR**  
UNLIMITED®

## Lab 5: Artisanal Indexes

3.2 p1

## Setting up the lab

1. Restart your SQL Server service (clears all stats)
2. Restore your StackOverflow database
3. Copy/paste and run the setup script:  
[BrentOzar.com/go/indexlab5](https://BrentOzar.com/go/indexlab5)
4. That's it. No running load test this time.



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## My index tuning strategy

Just  
once

**Dedupe** – reduce overlapping indexes

**Eliminate** – unused indexes

Weekly  
for 1  
month

**Add** – badly needed missing indexes

Do this only  
AFTER the easy  
stuff above

**Tune** – indexes for specific queries

**Heaps** – usually need clustered indexes

We're very much in the  
T section here: hand-  
crafted tuning.



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## And we're tuning hard problems.

It can be hard to identify when artisanal indexes are a good fit for your workload.

So I'm going to give you a simpler workload:

- Just a few stored procedures to choose from
- They might a good fit for an artisanal index
- But you still have to figure out which feature is right, and you may have to change code to get it to work

No load test generator this time.



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## Your mission, should you choose

1. Pick one of the stored procs at right  
(just like real life, there's no comments – you have to figure out what it's doing)
2. Design the right index for it
3. If necessary, modify the query so the index gets used (you don't have to wait for your manager)
4. Post your findings in Slack

### Candidates:

usp\_IXReport1

usp\_IXReport2

usp\_IXReport3



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## How to know if a query gets better

Set a baseline with the original version:

- Turn on the actual query plan
- SET STATISTICS IO ON
- Use the Messages tab to get the total number of logical reads (StatisticsParser.com helps)

Do your index tuning

Run the query again, get the logical reads and actual query plan



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## Posting your lab work in Slack

Include:

- The original logical reads, query plan
- The index change you made (script)
- The improved logical reads, query plan

Paste plans at [PasteThePlan.com](https://PastethePlan.com)

To turn in T-SQL, click the lightning bolt,  
then click Add Snippet



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