



BRENT OZAR
UNLIMITED®

Lab 1: Solving PAGEIOLATCH

1.4 p1

Setting up for the lab

1. Restart the SQL Server service (clears stats)
2. Restore your StackOverflow database
3. Copy & run the setup script:
BrentOzar.com/go/serverlab1
4. Start SQLQueryStress:
 1. File Explorer, D:\Labs, run SQLQueryStress.exe
 2. Click File, Open, D:\Labs\ServerLab1.json
 3. Click Go



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What the setup script does

Creates some stored procedures

Drops all nonclustered indexes

Sets MAXDOP = 1
(because we're not ready to cover parallelism yet)



1.4 p3

What you're going to see

In SQLQueryStress, "Iterations Completed" won't move very quickly. (Or at all.)

Take long samples of waits:

```
sp_BlitzFirst @Seconds = 60, @ExpertMode = 1
```

Investigate to see if indexes will help:

```
sp_BlitzIndex @GetAllDatabases = 1
```

See what queries are causing those waits:

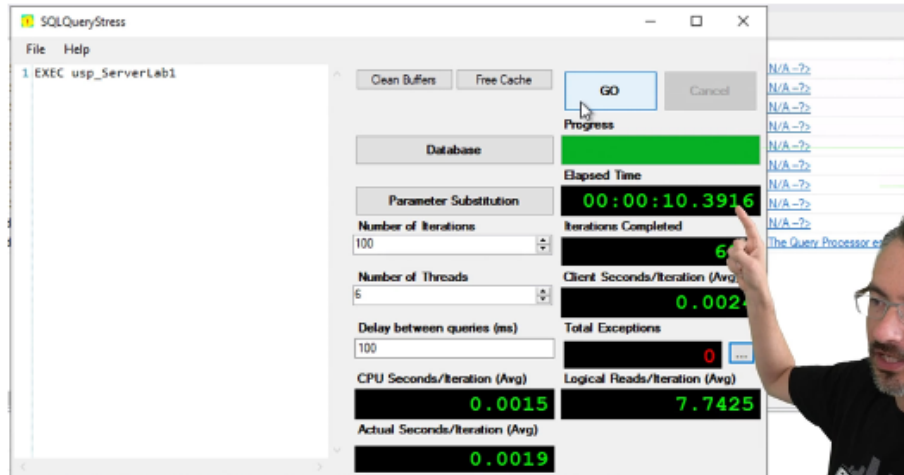
```
sp_BlitzCache @SortOrder = 'reads'
```

Add memory if you have to, but...remember, indexes/queries first. (Don't touch MAXDOP yet. More on that later.)



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Your goal: a sub-60-second run.



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How I'd spend this 2 hours

1. Lunch (1 hour)
2. Check the server's top wait types, the queries causing those wait types, and write down your metrics (10 min)

```
sp_BlitzFirst @Seconds = 60, @ExpertMode = 1;  
sp_BlitzCache @SortOrder = 'reads'  
sp_BlitzIndex @GetAllDatabases = 1
```
3. Change a couple/few things on your server (5-10 min)
4. Go back to #2



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Stumped? Take a peek at Slack.

The Slack room lets you see:

- Other peoples' answers
- How quick (or slow) you are compared to them
- How thorough you are compared to them
- Who you should cheat off of during the final exam



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If you're using one of my VMs

Email me at Help@BrentOzar.com.

If you don't email me, we'll turn off your VM today because we'll assume you didn't show up for class.



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