BRENT OZAR
UNLIMITED®

# Lab 5: Architecture Changes

Restore your StackOverflow database to get ready.

3.4 p1

## We've acquired EelSlap.com

We bought a small startup in our industry space.

- 5 .NET developers and they're staying on
- No DBA or sysadmins

They've got an app that runs on SQL Server.

- VM with cores 4GB RAM
- SQL Server Standard Edition
- Fast paced web app chatty lots of calls to SQL

Their users are kinda unhappy with performance.

3.4 p3

## We're about to hit the gas.

They only have about 100 customers today.

We have over 1,000 customers, and we're going to sell their app to our existing customers.

So we expect >10x user growth in the next 1-2 years.

We know we need to invest in the app & database.

3.4 p4


# We’re putting you in charge.

You can

1 Have the developers stop adding features and instead focus on specific performance changes you want or

Request additional server hardware or licensing they only own cores of Standard Edition or

Implement scale out techniques to spread load

But here s the catch you have a limited budget
You can only do one of those things

## 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/serverlab5
4. Start SQLQueryStress:
   1 File Explorer D Labs run SQLQueryStress exe
   2 Click File Open D Labs ServerLab5 json
   3 Click Go



## The current server

- Cost Threshold 50, MAXDOP 4
- Max memory: 55GB
- Licensed with 8 cores of Standard Edition
- Pretty fast storage

# How I'd budget this hour

0 min look for an easy boost Run sp BlitzFirst to check your wait stats and look at what queries or indexes are causing those waits Stop the load test experiment with code and or indexes You may be able to get some fast gains right away *Save your work in a text file.*

20 minutes: think long term. Start the load test again, and see how it's working now. What are the breaking points going to look like as we grow 10x?

10 minutes: write your recommendations. Do you want to change code/indexes, hardware, or scale out? Write it up, and explain why you want that approach.