Chapter 3: Slow Queries

Lab: Building an Index in the Foreground in Production

Problem:

In this lab, you're going to simulate a foreground index build, in production.

Setup:

- Download the handouts, and unpack. Place the following in your vagrant VM's `shared` directory:
    - `set_up_building_index_in_foreground.sh`
    - `building_index_in_foreground.py`
- Download and unpack the employees.zip dataset and place it in your vagrant's `/shared` directory.
- Run `set_up_building_index_in_foreground.sh` from the `/shared` directory within your VM, which will do each of the following:
    - Kill any `mongod` server processes running in the VM
    - Delete the `~/data` directory
    - Start a replica set listening on ports `30000`, `30001`, and `30002`.
    - Ensure that the server on port `30000` has the highest priority
    - Sleep for 20 seconds to ensure that a Primary has been elected
    - `mongoimport` the `employees.json` file into the `m312.employees` namespace.
- Next, you'll want to simulate your application, and trigger your index build. If you've set everything up as described here, run `building_index_in_foreground.py`.

While this is going on, feel free to run `mongostat` against your server to get a feel for what's going on while your "application" is running.

The python script will do the following:

Your job is to go in and find the index build, plus any evidence of long-running `read/update` operations that occur as a result of the index build. Be careful not to mistake other operations (such as the `mongoimport`) for the index build.

Note:

You may find it helpful to rotate your log files , expecially if you run the python script more than once.

To demonstrate that you've identified both the index build, and the long-running operations, answer the following question:

When do the long-running operations begin to appear in the log files, based on their timestamps?

Attempts Remaining: **Correct Answer** ✅ ⚪ ⚪

Choose the best answer:

- ⚪ *More* than a minute *before* the index build began.

- ⚪ *Less* than one second *before* the index build began.

- ⚪ *Less* than one second *after* the index build began.

- ⚪ *More* than one second *after* the index build began, and also more than one second *before* the index build ended.

- ⚪ *Less* than one second *before* the index build ended.

- ⦿ *Less* than one second *after* the index build ended.

- ⚪ *More* than one second *after* the index build ended.

- ⚪ *More* than a minute *after* the index build ended.

Correct!	See detailed answer

Proceed to next section

Assignment is Due

00d:04hr:06m
24 gru, 17:00 UTC

Your Grade

PASS/FAIL
Submitted