

15-400 Spring 2018 Bi-Weekly Report 5
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Major Changes:

Currently no major changes.

What You Have Accomplished Since Your Last Meeting:

Since last week, I have started running the controller script on Amazon AWS's Postgres9.2 and Postgres9.4, which contains 6 previously defined workload in total, to collect baseline experiment data for those two database versions. My goal is to collect 2000 ~ 5000 knobs and metrics data without using the OtterTune service to tune the tunable configuration knobs of Postgres. The experiment went on well but sometimes there were annoying issues that stopped the experiment, e.g. disk space full on AWS. The PhD student would help me troubleshooting those issues. We have collected ~2000 samples so far and need more (the more the better). So the baseline experiment will keep running over the next week.

For the OtterTune server, we want to connect it with a database benchmark. I was working on making a glue that connects the controller (which starts experiments) and the benchmark (which measures the performance of the database). My next goal is to start experiments that tune AWS database knobs using the OtterTune pipeline. There are also still a couple of small issues on the server's side so my advisor thinks it is better to start the experiment next week. For this week, I'm hanging around fixing small issues.

Meeting Your Milestone:

Yes.

Surprises: No surprises found so far.

Looking Ahead:

I will finish collect the baseline experiment samples by the end of this week and start collecting results of database performance that uses the OtterTune pipeline to tune the knobs next week to see how the performance is improved on AWS database. Then I'll discuss with the PhD student to design experiments that use tuned Postgres9.2 knobs for Postgres9.4 to see how tuned knobs could be carried across versions and how the performance would be. From this point, there might be some surprises.

Revisions to Your Future Milestones:

No major changes.

Resources Needed:

Yes. I have got all the resources I need.