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HW Sim 2

For this assignment, many unexpected bugs, IT difficulties, and time constraints restricted the amount of process made. Starting with the fact that dozens of students simultaneously using qstruct severely overloaded the server, meaning that during the only times available during the day to work on the assignment, the server constantly forced users to disconnect. This interrupted processes and required the setup process to be repeated several times a day. In the last few days of the assignment, the server was still overloaded.

The other major hurdle for this assignment was aerialvision. With little to no direction or help, figuring out how to get tkinter to work through the server was a near-impossible task. Even with the help of peers and piazza forum posts, it took over a dozen hours over several days studying WSL and VPNs to realize that Cisco AnyConnect was deterring the ssh connection from functioning properly. It appeared that I was the only one running into this particular issue with WSL being unable to run ssh with the VPN enabled, but by the time I figured out what I needed to do it was far too late and I did not have enough time to run all the required simulations or make the required changes to the code to finish this assignment. Ultimately, I installed Microsoft AnyConnect and uninstalled Cisco AnyConnect, and finally the aerialvision script ran with no issues. However, I had to have an ssh instance open with WSL for aerialvision, and an ssh instance open with VSCode to edit the code and configs. In this report, I present the baseline graphs I was able to pull in the little time I had left, as well as other screenshots to show my process.
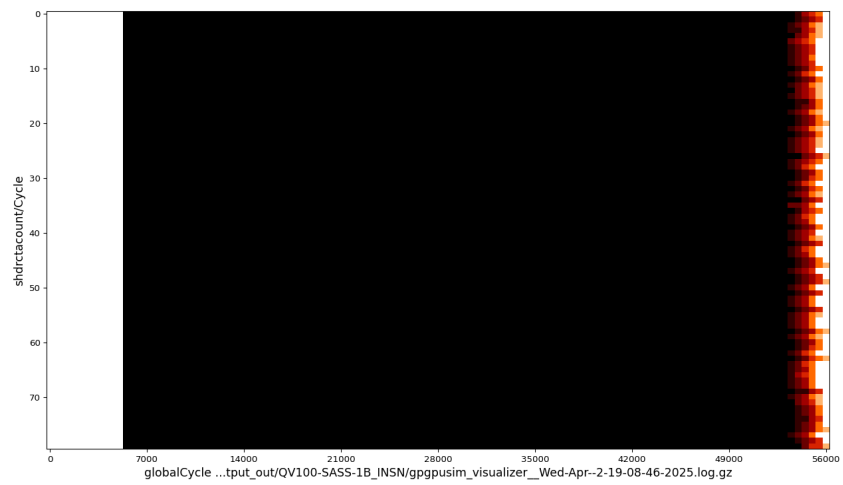
Although this assignment was given on March 5th, that was when the class was grinding to finish CUDA Lab 3, then immediately we began studying as hard as possible for the midterm. Significantly more time was spent on studying, at least in my case, than on an assignment just given to us. Immediately afterward was spring break, and many of us had family responsibilities or travel plans, making it impossible to work on the assignment. For the majority of the class, we were only given a single week, now plus an extra three days, for both HW Sim 1 and 2, while also juggling all other coursework. I write all this to ask for grace on this assignment, not to complain. If there were fewer IT problems, this would have been a much more enjoyable and doable project.
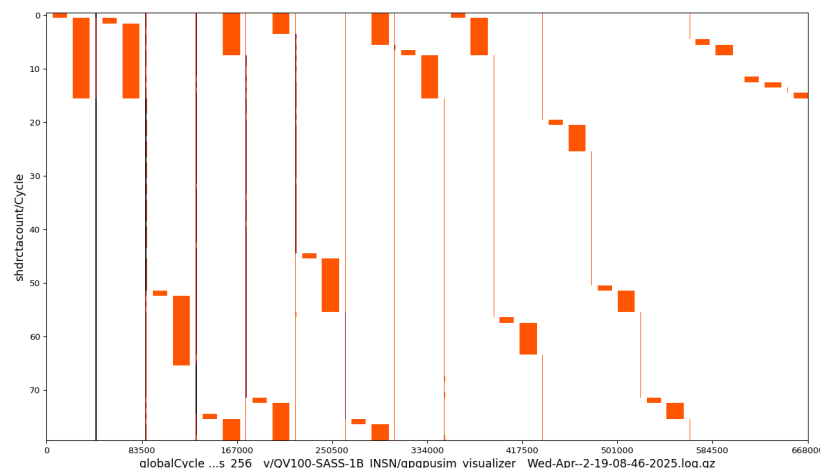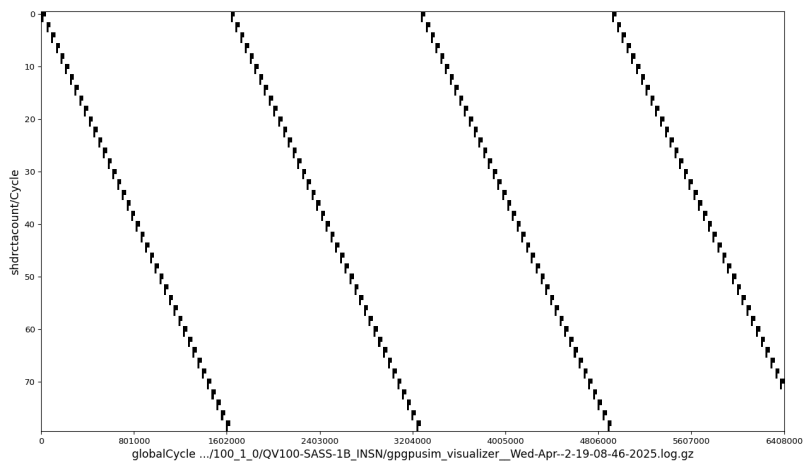

Baseline LUD CTA/shared vs cycles
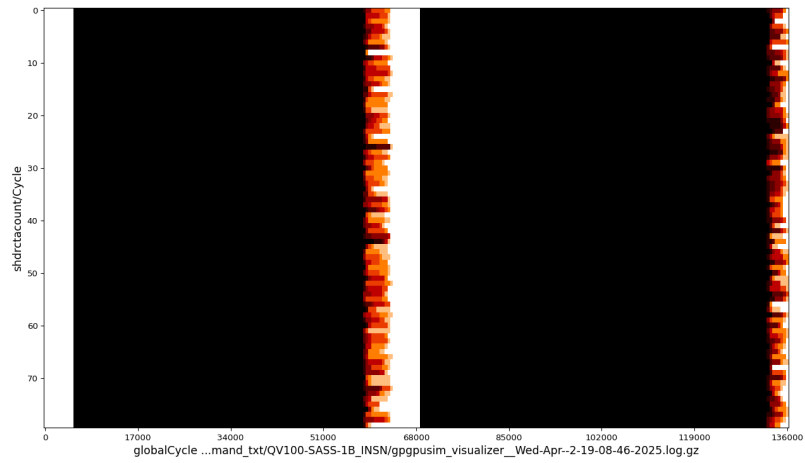
Baseline b+tree CTA/shared vs cycles

Baseline hotspot CTA/shared vs cycles

Baseline myocyte CTA/shared vs cycles

WSL Terminal Running aerialvision.py

8CLUSTER Config

The data collection script written for part 1 would have been reused to collect the IPC, L1 misses, and L2 misses if time allowed. Baseline IPC data had already been gathered for part 1, but it would have been educational to gather data for 8CLUSTER and the flat and greedy scheduling simulations. The L1 miss count is found in the last L1D_total_cache_misses metric, and the L2 miss count is found in the last L2_total_cache_misses metric.