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CSCE 313-503

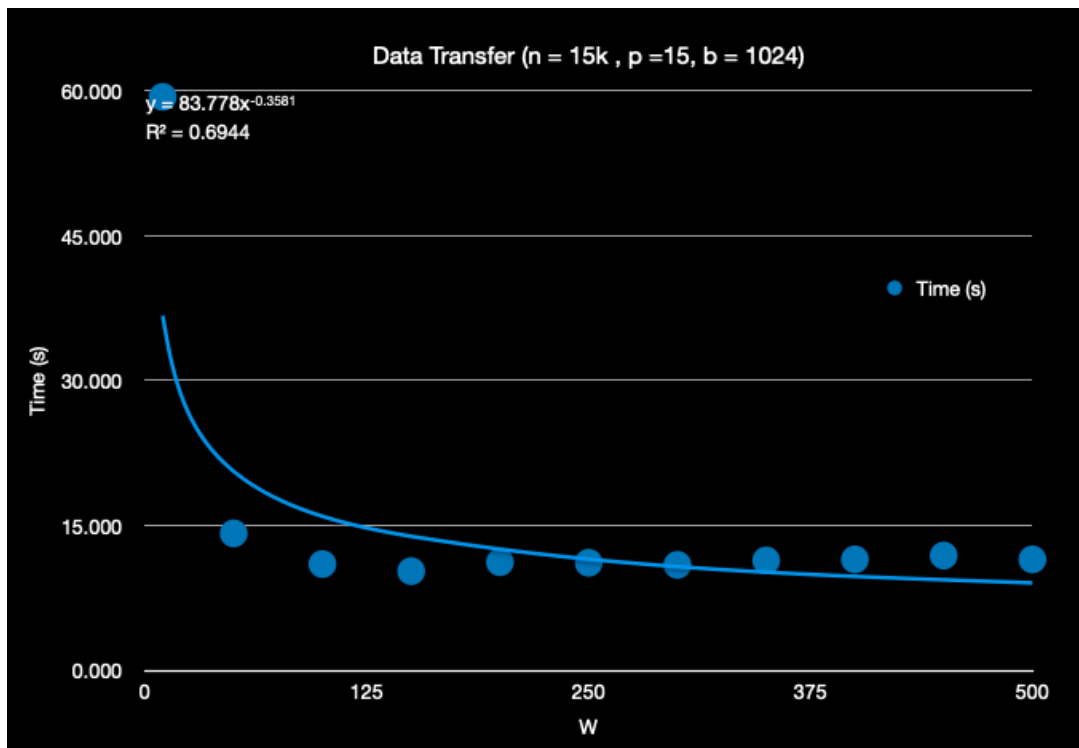
Professor Ahmed

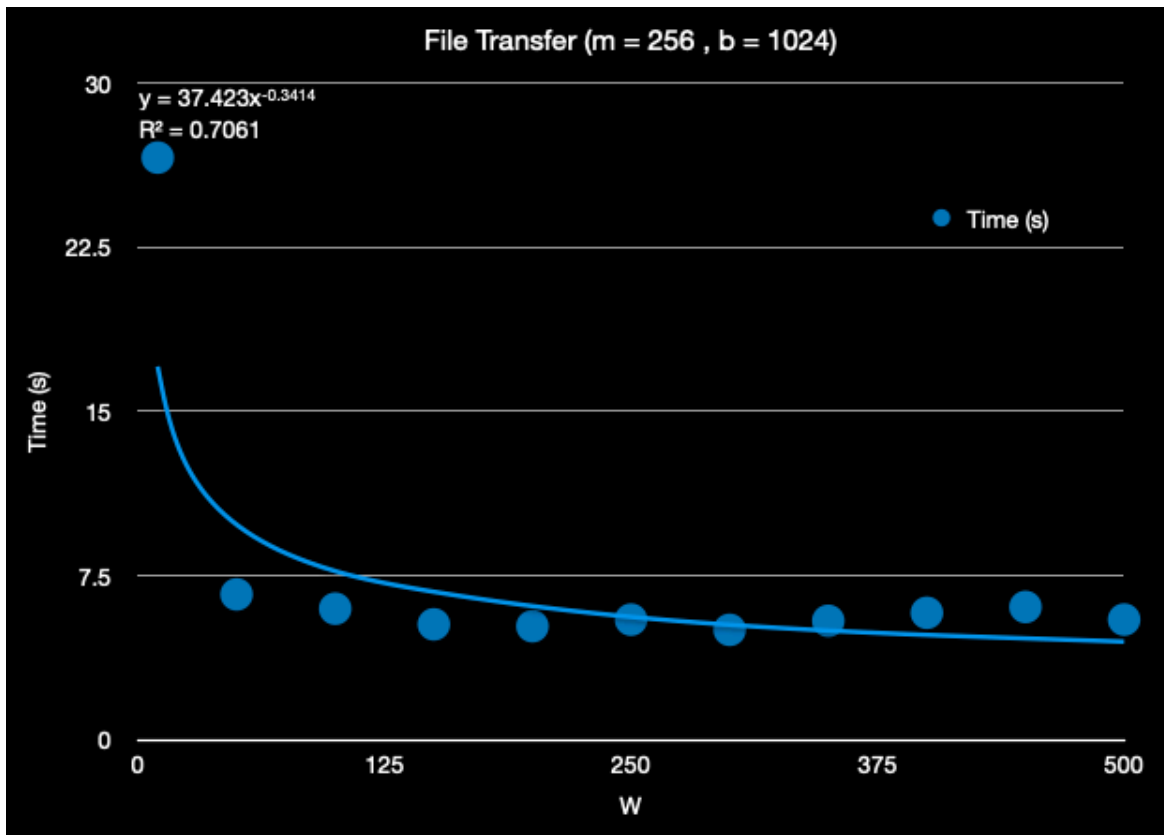
4-20-21

PA5

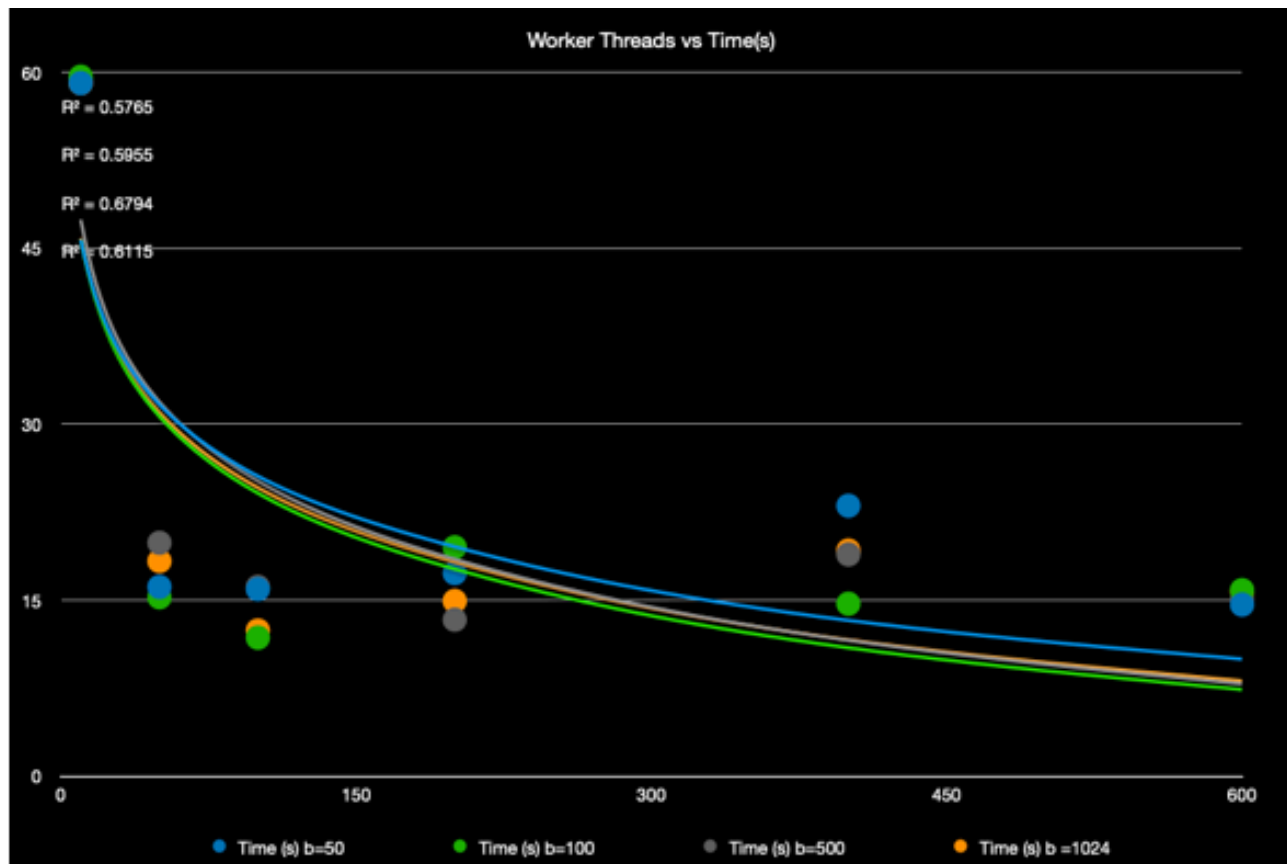
Video/drive link: https://drive.google.com/drive/folders/1G0Uf7WX1GpiTb2Tltzple7RCQH_jEuiY?usp=sharing

To start I want to show the varying performance of this program by solely increasing the number of worker functions while keeping all else the same ($n=15K$, $p=15$, and $b=1024$). Charts below:

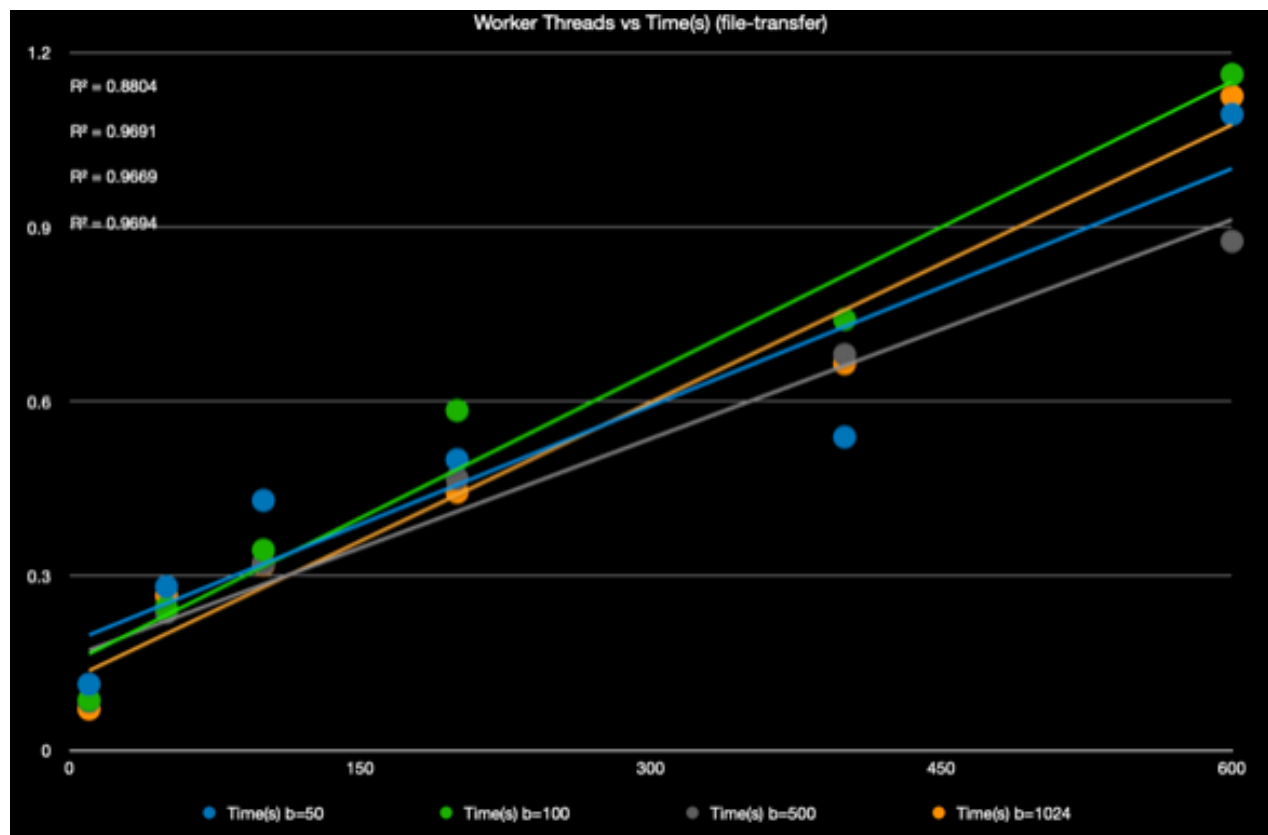




From the charts above we can see that in both file transfers and data transfers that the number of worker channels that seem to have the best performance is 150. This is slightly different than the PA4 program where I found through the charts below that the optimal number of threads is around 100, with diminishing return happening after that.(PA4 charts below)



The shape is relatively the same when considering data transfers, but when talking about file transfers, I pointed out in my last report that file transfers perform the best when there is only 1 thread. This is mirrored in some way in this PA5. We have 1 thread in total, but the number of channels is variable, this is in contrast to the PA4 file transfer, where the number of threads is variable.



We have to take note of the time values however. In this PA, the best time for data transfers and file transfer is 10.262 and 5.274 seconds respectively. In the previous PA, the best performing times for data transfers and file transfer are 11.795 and 0.071 seconds respectively. The times for data transfers are roughly comparable, the same cannot be said for file transfers.