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***PEX 2 Write-Up***

In this PEX, four different simulations were run based on a reference stream captured from an Intel Pentium system. The four simulations were run using an LRU stack with page sizes of 512B, 1kB, 2kB, and 4kB. The results of the four simulations can be seen in Figure 1.

**Figure 1.** Number of Frames vs Page Fault Rate

Based on the results of the simulation, the optimal frame size is 4kB because as can be seen in the purple curve in Figure 1, a frame size of 4kB produces the lowest fault rate for any frame allocation.

With this frame size of 4kB, if we want to keep the fault rate below 10%, I suggest the number of frames allocated to the process should be 125. Although allocating 106 frames to the process will put the miss rate just below 10%, allocating only 19 extra frames will for allow a 9.1% miss rate, likely keeping the miss rate below 10% for any simulation, not just this one.

In conclusion, a page size of 4kB and a process allocation of 125 frames should be used.

Documentation: See main file for documentation. No help was received on this word document.