

Implementing a High-Performance Computing Center

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Abstract

For this project, we will design and implement our first supercomputer. Given our cost constraints and application needs, we will identify the best hardware platform to use for this first installment of the system. We will order and install the system. We will then write software based on computationally intensive problems from mathematics and computer science to benchmark the supercomputer and fine-tune it to perform optimally. Finally, we will install and optimize a number of popular software packages to run on the supercomputer to perform complex calculations quickly.