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Beowulf Cluster

I chose this topic while doing research on parallel computing. What really caught my eye and sparked my interest was how scientist during World War II used the same method of Parallel Computing to solve mathematical problems in the Manhattan Project for the atomic bomb. During World War II, well before the advent of the electronic computer, a similar technique was used for carrying out long calculations associated with the design of the atomic bomb for the Manhattan Project. To significantly reduce the amount of time it took to solve a large mathematical problem, each part of the problem was performed by a different person. Interestingly enough, the people who performed these calculations were called computers. Today electronic computers can work in harmony to solve scientific problems not dreamed of even a decade ago. (http://www.climatemodeling.org/~forrest/osdj-2000-11/) After reading that excerpt from climatemodeling.org the topic was solidified. I also did some research on how costly it will be to replicate a Beowulf Cluster and found it would not be too costly to make a small 4 units replication of a cluster. The main research question is what is a Beowulf Cluster and its possible applications. The key ideas/concept behind the project would be performance comparison, what are the pros and cons to using a Beowulf Cluster compared to using a supercomputer, what are the difference between using a single computer to solve an issue and using a Beowulf cluster, how difficult and costly is it to build and implement working cluster. A few other related topics that I found related to Beowulf clusters are Finite element method, computational fluid dynamics, distributed computations, computational mechanics. The resources that we have looked through are from Google Scholar. Those resources explain how to create a cluster, it's a performance in parallel computing and about its cost. They are as follows-

1) http://coen.boisestate.edu/ece/files/2013/05/Creating.a.Raspberry.Pi-Based.Beowulf.Cluster_v2.pdf (used for how to create a cluster and its cost)
2) http://www.climatemodeling.org/~forrest/osdj-2000-11/ (used for solving how to solve issues when parallel computing)