The openMosix cluster software

The openMosix is a Linux kernel extension for single-system image clustering. The nodes in the cluster talk to one another and the cluster adapts itself to the workload automatically, therefore it can be used for HPC purposes. One of the advantages is that there is no need to use parallel programming.

The cluster is controlled by two main algorithms. Their functions are the following: running processes efficiently and memory management.

The openMosix file system has a very interesting feature. It allows all nodes to access all other node's filesystems. Unlike all existing network filesystems, which bring the data from the file server to the client node over the network, the openMosix cluster attempts to migrate the process to the node in which the file actually resides.

In addition openMosix supports Distributed Shared memory, Parallel Processing schemes and checkpointing.