

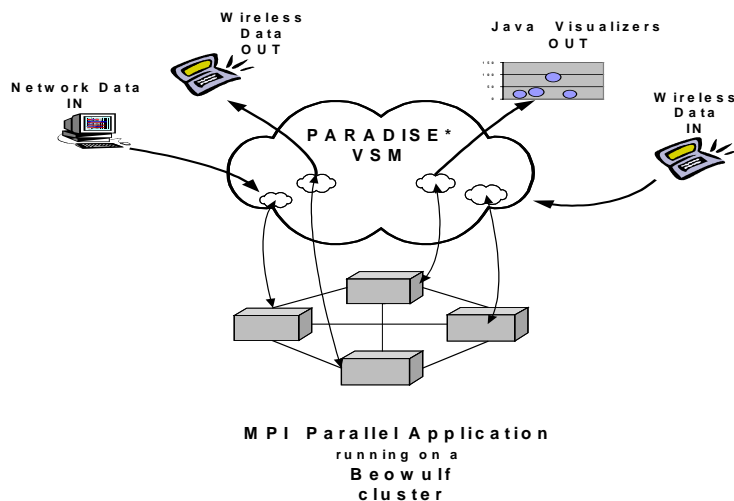
Paradise® for Use With Message Passing

Paradise offers better communication capabilities for Message Passing Systems

Paradise's Virtual Shared Memory (VSM) – an advanced Distributed Shared Memory - from Scientific Computing Associates Inc. can be used in conjunction with message passing systems, such as MPI and PVM, to enhance communication capabilities.

Many codes involve at least some data that, logically, should be equally accessible to all processes at all times. ***Paradise*** permits developers to combine shared memory and message passing styles of parallel programming in the same program. Data that should be equally accessible to all processes is shared via ***Paradise***'s distributed shared memory. This minimizes the need for message passing and improves overall performance of the code.

Furthermore, few applications exist in a vacuum. Developers can use ***Paradise*** to create “ensemble applications” from separate independent programs - even running on different machines. For example, in the illustration below, computers in a Beowulf cluster running a parallel application implemented with MPI can get required input data from a ***Paradise*** VSM that has received it from anonymous data sources. The cluster computers can also put results into the ***Paradise*** VSM as they are computed or on a periodic basis. Separate independent visualization applications (for example, written in Java) can retrieve the data from the ***Paradise*** VSM and display it graphically without requiring access privileges to the Beowulf cluster.



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