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Research Area:
High-Performance Cluster Computing

The research involves solving a multi-dimensional conduction heat transfer problem on a Linux cluster using Parallel Virtual Machine (PVM). Temperature distribution in a X*Y size wall can be determined by solving the Laplace Equation. The larger the problem size gets, the more computing power is needed. Therefore, the PVM system is used because it enables a collection of computers to be used together for a concurrent or parallel computation. Linux is used because it is a sophisticated multitasking virtual memory operating system that directly controls the hardware and provides true multitasking, virtual memory, shared libraries, demand loading, shared copy-on-write executables, TCP/IP networking, and file systems.

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