

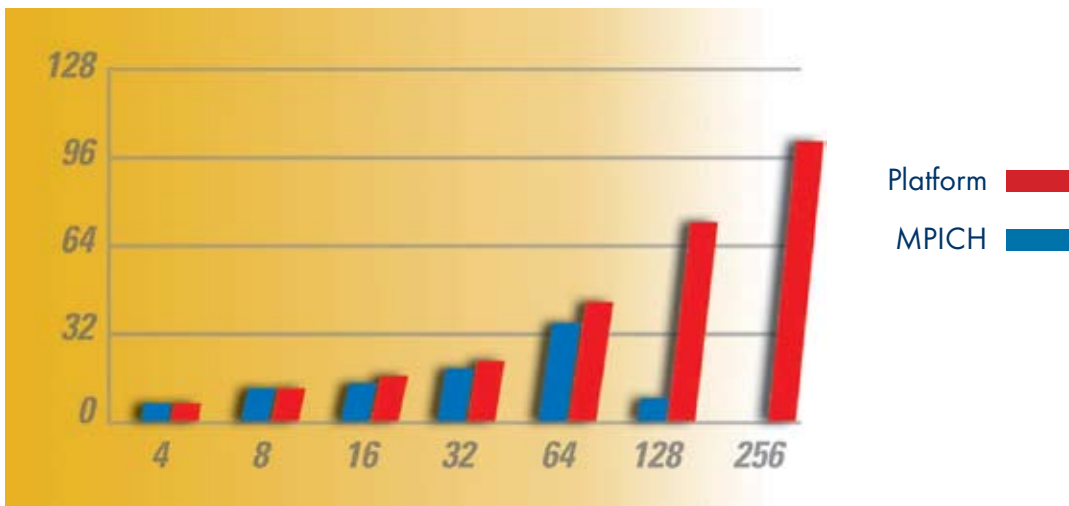
Platform™

Powering High Performance



Platform MPI

Performance, Simplicity, and High Availability



Platform MPI is a fully integrated message passing interface (MPI) solution that enables users to take advantage of the leading interconnect technologies to build high performance applications, while simplifying the number of binary distributions required. Platform MPI communication libraries result in applications that leverage the latest high performance technologies while simplifying the development complexity, the testing challenges, and the support burden of multiple software distributions.

Simplicity

High performance parallel application development is complicated enough without the additional burden of managing support for a growing list of hardware architectures that leverage different interconnects. Platform MPI simplifies development, testing, and maintenance through its unique interconnect-independent architecture. Through the use of dynamic runtime selectable libraries, developers are able to distribute a single binary executable that

supports a full range of end user interconnects. This reduces the number of binaries that have to be produced, tested, maintained, and distributed to customers, while increasing the overall reliability of the application.

High Availability

As compute clusters grow in size and complexity, and application run times become longer, application failure due to network failure is increasingly becoming an issue. Platform MPI/HA is an option to the Platform MPI solution that increases application availability by providing network failover and improved communication error checking. By monitoring the network, applications can respond to failures in the high speed network and automatically switch to a secondary Ethernet network. Platform MPI/HA is the only MPI solution that offers application-level network redundancy, assuring jobs run to completion.

Total Platform Solution

Platform offers a total solution for high performance computing, which includes Platform Manager for cluster provisioning, monitoring and upgrading, and Platform MPI for a high performance, easy to use MPI solution. Platform also offers the consulting, training and support to ensure your success. Our total solution provides the industry's fastest, most functional and scalable products for high performance clustering.

Key Features

Heterogeneous cluster support

Application processes are distributed at run time across nodes, leveraging a range of different hardware architectures, such as x86, x86-64, or EM64T.

Automatic selection of optimal network

Through the use of a priority network list built from system configuration files, user environment variables, user command line options and library hard-coded defaults, Platform MPI can dynamically select the optimal network connection between each node and each other node within a cluster at runtime.

Multithread safe

Multithreaded applications can fully exploit Platform MPI and multiple threads can simultaneously request services and conduct communication.

Linux® command line replication

Command line arguments to the application are automatically provided to all MPI processes, avoiding tedious parsing and broadcasting of parameters to other MPI processes.

MIMD support

The Multiple Instruction - Multiple Data (MIMD) model is supported through provisions that launch different executables which constitute the whole MPI application.

Tracing and monitoring

MPI-related monitoring presentation can be selected through environment variables to determine presentation of timing and trace information. Regular expressions, single or groups of functions and other options can be selected for monitoring.

Support for popular debuggers

PIMPI fully supports Platform MPI fully supports Etnus TotalView® analysis tools, Allinea's distributed debugging tool (DDT), and standard GNU gdb.

Platform™

Platform Computing is a pioneer and the global leader in High Performance Computing (HPC) management software. The company delivers integrated software solutions that enable organizations to improve time-to-results and reduce computing costs. Many of the world's largest companies rely on Platform for workload management and cluster and grid management. Platform has over 2,000 global customers and strategic relationships with Dell™, HP, IBM®, Intel®, Microsoft®, Red Hat® and SAS®, along with the industry's broadest support for HPC applications. Building on 15 years of market leadership, Platform continues to define the HPC market. Visit www.platform.com

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