



Platform MPI 7 (formerly HP-MPI)

Platform's message passing interface library for parallelizing HPC software applications

Highlights:

- Supports the widest range of hardware and operating systems of any commercial MPI library
- Distributed by over 30 leading commercial software vendors for use with their applications focused on performance
- Ensures production quality implementation
- Includes a wide range of debugging and profiling tools

Benefits:

- Reduces application software development costs
- Protects your application software investment
- Reduces time-to-market
- Optimizes performance without compromising portability or flexibility
- Ensures production quality implementation

Platform Computing has acquired the HP-MPI business from Hewlett Packard.

HP-MPI is widely used in the HPC industry as a fully integrated message passing interface (MPI) solution that is used by over 30 independent software vendors (ISVs) to build high performance applications. The HP-MPI acquisition, now known as Platform MPI 7 follows Platform's successful acquisition and integration of the Scali MPI product, now known as Platform MPI 5.6, into its suite of HPC management software used in all three areas of HPC adoption; clusters, grids, and clouds.

Ideal for:

- Enterprises that develop or deploy applications on HPC clusters, especially those using parallelized software applications
- For commercial software vendors who want to improve the performance of their applications over the widest range of computer hardware and operating system types.

An industry standard for scalable, parallel applications

Platform MPI 7 (formerly HP-MPI) is a high performance, production-quality implementation of the Message Passing Interface (MPI). It is widely used in the high performance computing (HPC) industry and is considered the *de facto* standard for developing scalable, parallel HPC applications. Platform MPI 7 supports a broad range of industry standard platforms, popular high performance interconnects and operating systems.

Universal, standards-based

More than 30 independent software vendors (ISVs) distribute Platform MPI 7 for use with their distributed-memory parallel applications on high performance computing (HPC) clusters. Customers that deploy applications based on Platform MPI 7 realize increased portability, improved performance, and better reliability in the execution of their software applications.

Focus on portability

Platform MPI 7 allows software developers to build a single executable that transparently leverages the performance features of each type of interconnect, thereby providing applications with optimal latency and bandwidth for each protocol. This greatly reduces the efforts to make applications available on the latest and greatest interconnect technologies on Linux, HP-UX and Microsoft Windows.

Focus on portability, continued

Platform MPI 7 is optimized for both distributed (DMP) and shared memory (SMP) systems making it ideal for multi-core environments. It uses enhancements where appropriate to provide low latency and high bandwidth point-to-point and collective communication routines. It also supports multi-protocol execution of MPI applications on clusters of shared-memory servers so that applications can take advantage of the shared memory for intra-node communications. Platform MPI 7 also supports processor affinity with a variety of CPU binding strategies for both processes and threads. This enables applications to manage memory and cache conflicts by intelligently distributing the load among the multiple cores.

Platform Cluster Manager compatibility

Platform Cluster Manager, provides the most advanced suite of HPC infrastructure components, includes a range of industry standard, pre-tuned MPI implementations making it easy to get your parallel applications up and running quickly.

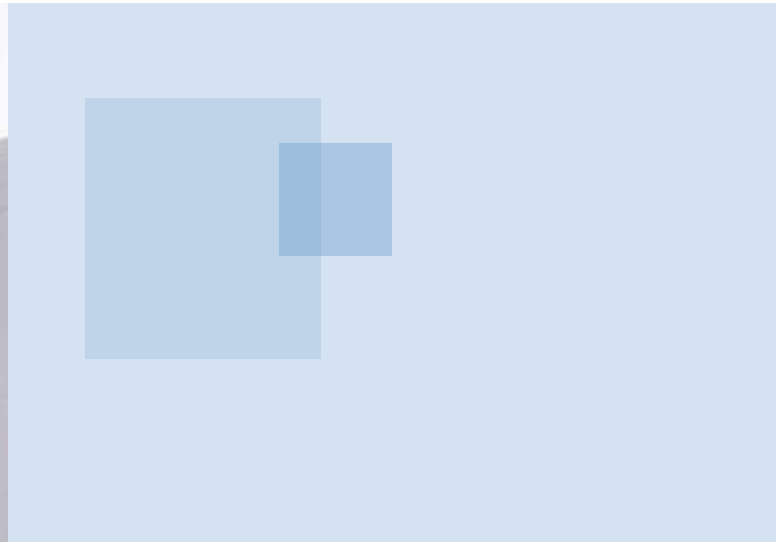
High quality for production deployment

Platform Computing tests and packages Platform MPI 7 as a production software product, ensuring the outstanding quality, reliability, and robust capabilities demanded for a production deployment. In addition, Platform MPI 7 supports key reliability features such as resource cleanup, signal propagation, and standard I/O (stdio) processing.

Since Platform MPI 7 supports industry standard interconnects, software vendors are able to standardize on Platform MPI 7 and focus their testing on application code, rather than testing numerous combinations of MPI libraries and interconnects. The reduced testing time results in lower development and support costs and higher quality applications. For developers of in-house applications, Platform MPI 7 is licensed by core with pricing that includes built-in discounts for volume purchases.

Features and Benefits in Detail

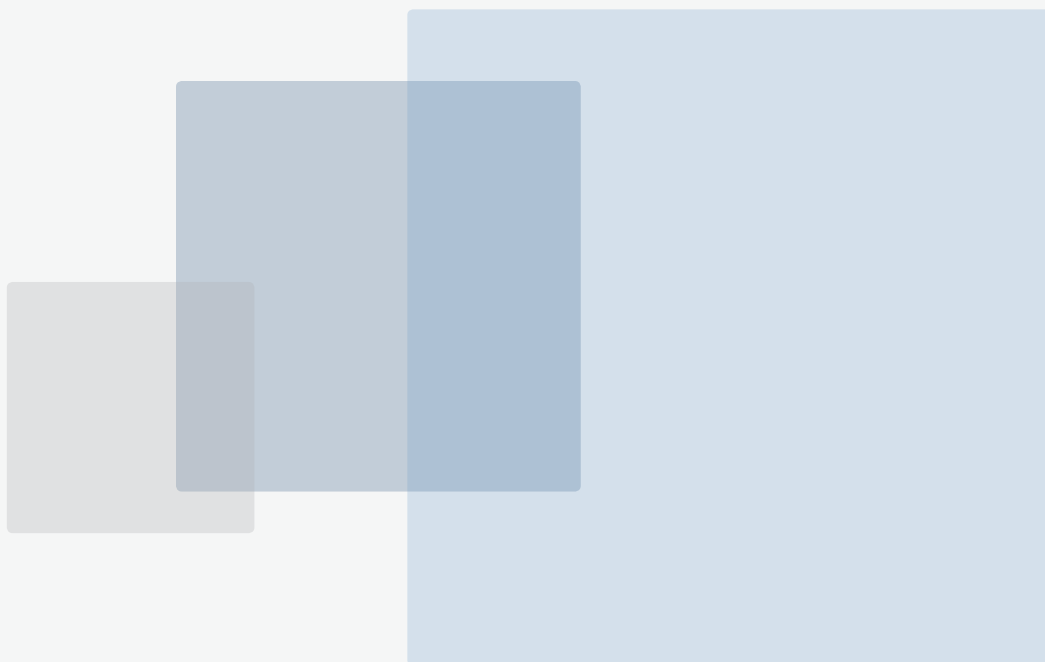
	Feature	Benefits
Simplicity	<ul style="list-style-type: none"> Fully complies with the MPI-1.2 standard, includes full MPI-2 functionality (dynamic processes, one-sided communications, extended collectives, thread safety, and updated ROMIO) Complete debugging and profiling tools (diagnostic library provides message signature analysis, object space corruption detection, and multiple buffer-write detection). Light weight profiling tools provide vital run-time statistics to help users understand communication patterns and message-passing us-ages; supports TotalView® and Intel® Trace 	<ul style="list-style-type: none"> Applications port easily to other platforms Protects ISV software investment Reduces time-to-market Increases robustness and quality of complex applications
Agility	<ul style="list-style-type: none"> Supports SMP optimization (intra-node communication via shared memory when appropriate) Supports and transparently recognizes multiple industry-standard interconnects and protocols (InfiniBand®, Myrinet® GM-2, Quadrics QsNet, Elan3/Elan4, RDMA-enabled Ethernet, TCP/IP, uDAPL, IT-API, OFED) 	<ul style="list-style-type: none"> Optimizes performance without compromising portability or flexibility Provides the highest performance available for an individual interconnect Maintains portability Reduces the number of combinations of binaries that must be tested for application release
Values	<ul style="list-style-type: none"> Large automated test suite (tested with selected ISV applications prior to general release) Robust features (stdio processing, signal propagation, application cleanup, exit status gathering, process accounting, auto-double FORTRAN extension for CRAY compatibility) MPICH2 compatibility Highly available infrastructure 	<ul style="list-style-type: none"> Ensures production quality implementation Accepts applications from a wide range of other programming environments Provides flexibility for use with 3rd-party tools Enhances system reliability and application stability



Supported Operating Systems	
Linux®	x86 running Red Hat Enterprise Linux AS 4 and 5, or SuSE Linux Enterprise Server 9 and 10 OS
Microsoft® Windows®	x86 running Microsoft® Windows® CCS 2003, Microsoft® Windows® Server 2003, Microsoft® Windows® XP and Microsoft® Windows® HPC 2008
HP HP-UX	HP-UX 11i v2 is supported on PA-RISC systems and HP Integrity platforms, HP-UX 11i or later is supported on PA-RISC systems

Supported Interconnects by Processor Type				
	Ethernet	InfiniBand	Myrinet	Quadrics
Intel® IA-32	✓	✓	✓	✓
Intel® IA-64	✓	✓	✓	✓
Intel® Itanium®	✓	✓	✓	✓
AMD® Opteron™	✓	✓	✓	✓

Protocol	Option	Supported Architecture			NIC Version	Driver Version
		i386	X86_64	IA64		
Shared Memory on SMP	N/A	✓	✓	✓	N/A	N/A
OpenFabrics	-IBV	✓	✓	✓	Any IB Card	OFED 1.0, 1.1, 1.2, 1.3, 1.4
uDAPL Standard	-UDAPL	✓	✓	✓	IB vendor specific 10GbE vendor specific	uDAPL 1.1, 1.2, 2.0
QLogic PSM	-PSM		✓		QHT7140	PSM 1.0
Myrinet MX	-MX	✓	✓	✓	Rev D, E, F, 10G	MX 2g, 10g, V1.2x
Myrinet GM	-GM	✓	✓	✓	Rev D, E, F	GM 2.0 and later
Quadrics Elan	-ELAN	✓	✓	✓	Rev 01	ELAN4
TCP/IP	-TCP	✓	✓	✓	All cards that support IP	Ethernet Driver, IP



Platform™

Platform Computing is the leader in grid and cloud computing software that dynamically connects IT resources to workload demand according to business policies. Over 2,000 of the world's largest organizations rely on our solutions to improve IT productivity and reduce data center costs. Platform has strategic relationships with Cray, Dell™, HP, IBM®, Intel®, Microsoft®, Red Hat®, and SAS®. Building on 16 years of market leadership, Platform continues to help data centers be more efficient, responsive and dynamic. Visit www.platform.com.

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