IBM Platform MPI V9.1 delivers high-performance parallelization to your Technical Computing applications

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At a glance

IBM® Platform MPI V9.1:

- Improves parallel application performance

- Increases developer and engineer productivity by reducing the number of qualitative tests

- Optimizes cluster utilization with bulletproof runtime execution and backwards compatibility

- Simplifies application installation by providing application availability and integration on the widest choice of platforms

- Delivers broader application applicability with full MPI-2 functionality

- Provides faster, more dependable response to issues, including superior support for public domain and other commercial MPI libraries

  - Superior scalability, can scale up to 64,000 processes

  - New high availability features, including TCP and IB/SRQ on-demand connections, and RDMA to TCP network failover

  - Early preview of MPI3.0 features: Nonblocking collectives and high availability features

Overview

IBM Platform MPI V9.1 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 one of the standards for developing scalable, parallel applications.

Platform MPI maintains full backward compatibility with HP-MPI and applications supported by it. IBM Platform MPI incorporates advanced CPU affinity features, dynamic selection of interface libraries, superior workload manager integrations, and improved performance and scalability.

Platform MPI supports the broadest range of industry-standard platforms, interconnects, and operating systems to help ensure that parallel applications can run almost anywhere. It runs on a variety of hardware and operating environments, including the latest generation of IBM System x® servers. By prequalifying and certifying these platforms, IBM helps clients take the risk out of mission-critical high-performance technical computing deployments.

Platform MPI V9.1 provides integration with IBM Parallel Environment (IBM PE) Runtime Edition so customers can take advantage of the many tools in IBM PE Runtime Edition, such as IBM PE Debugger, during the run time.

Specifically, IBM Platform MPI V9.1 provides the following enhanced features and functionalities from its previous version:

- IBM PE Runtime Edition startup and support
- Increased scalability to more than 64,000 processes/ranks, approximately 1.3 times higher
- New high availability features, including TCP and IB/SRQ on-demand connections, and RDMA to TCP network failover
- Early preview of MPI3.0 features, including:

  – Nonblocking collectives

  – High availability features (defined in MPI3.1 proposal)
- Improved performance of collective algorithms
- Improved CPU binding functionality and features
- Improved intranode copy for GPU-memory message
- IB/XRC Multirail support
- IB/PMS intramix support
- Intel Xeon™ Phi (MIC architecture) support for offload programming model
- Introduction of internal cluster test and verification tools integrated into the IBM Platform MPI libraries
- User-defined command line parameter aliasing allowed for mpirun command

With IBM Platform MPI deployment, customers can benefit from the following:

- Obtain higher-quality results faster
- Reduce development and support costs
- Improve engineer and developer productivity

Key prerequisites

- IBM System x and non-IBM x86 and x64 servers

IBM Platform MPI V9.1 includes support for the following operating systems:

- Red Hat Enterprise Linux™ 4.6, 5.x, and 6.x
- SUSE Linux Enterprise Server 10 and 11
- CentOS 5.x
- Microsoft™ Windows™ XP/Vista, Server 2003/Server 2008
- HPC Server 2008, Windows 7

Planned availability date

- December 14, 2012: Electronic delivery
- January 11, 2013: Physical media

Description

Focus on portability

IBM Platform MPI enables developers to build a single executable that transparently leverages the performance features of any type of interconnect, thereby providing applications with optimal latency and bandwidth for each protocol. This reduces

development effort and enables applications to use the most current technologies on Linux or Microsoft Windows without the need to recompile and relink applications.

Platform MPI is optimized for both distributed (DMP) and shared memory (SMP) environments and provides a variety of flexible CPU binding strategies for processes and threads, enabling better performance on multicore environments. With this capability, memory and cache conflicts are managed by more intelligently distributing the load among multiple cores.

Platform MPI also provides support for Nvidia GPU memory or messaging as well as GPUDirect 2.0. Thus applications running on GPUs can take full advantage of the parallel processing power of GPGPU.

With the support for Windows HPC Server 2008, Platform MPI allows developers targeting Windows platforms to enjoy the benefits of a standard portable MPI and avoid proprietary lock-in.

Network optimization

IBM Platform MPI supports a wide variety of networks and interconnects, enabling the development of applications that will run on more platforms and reducing testing, maintenance, and support costs. Along with the TCP interconnect, Platform MPI provides excellent MPI performance on InfiniBand by providing support for both QLogic Performance Scaled Messages (PSM) and Mellanox IB-Verbs (IBV) interconnects. In addition, Platform MPI supports Mellanox Fabric Collective Acceleration (FCA), which enables it to offload collectives to the InfiniBand fabric, dramatically improving MPI run times.

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 run time. This maximizes network efficiency so that processes get the data they need quickly.

Key features and benefits

- **Simplicity**
  - Features
    - -- Fully complies with the MPI 2.2 standard, providing dynamic processes, one-sided communications, extended collectives, thread safety, and updated ROMIO, a high-performance, portable implementation of MPI-IO
    - -- Provides comprehensive debugging, diagnostic, and profiling tools
    - -- Features auto-detection of interconnects and dynamic loading of libraries
    - -- Does not require relink for debugging and profiling
    - -- Is supported by the largest dedicated HPC support organization
  - Benefits
    - -- Easily ports applications to other platforms
    - -- Protects ISV software investment
    - -- Reduces time-to-market
    - -- Increases robustness and quality of applications
    - -- Quickly and efficiently resolves technical problems
- **Performance**
  - Features
    - -- Improved shared memory performance, incorporating code and methods from Platform MPI 5.6 (Scali MPI)
    - -- Seventy-five percent reduction in job startup and shutdown at scale
    - -- Scalability up to 64,000 processes/ranks
    - -- RDMA message progression and coalescing enhancements

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- -- Flexible CPU binding options that maximize cache effectiveness and balance applications to minimize latency
- -- Automated benchmarking of collective operations
  - – Benefits
    - -- Takes maximum advantage of available hardware
    - -- Reduces latency for better performance
    - -- Improves performance without explicit developer action
    - -- Increases message throughput in streaming applications
    - -- Makes it easier to optimize application performance

- **Compatibility**
  - – Features
    - -- Common source-code base between Linux and Windows
    - -- Binary compatible with applications developed for HP-MPI
    - -- MPICH-2 compatibility mode
    - -- Linux Standard Bindings, which provides full compatibility across major Linux distributions
    - -- Scheduler agnostic with workload manager integrations for Windows HPC, Platform LSF® , PBS Pro, SLURM, and other popular schedulers and resource managers
  - – Benefits
    - -- Eliminates the cost of separate releases for different platforms
    - -- Can easily be used with existing MPI applications
    - -- Uses common "mpirun" syntax between Linux and Windows
    - -- Helps clients avoid proprietary lock-in
    - -- Significantly reduces floating point issues causing inconsistent results

- **Flexibility**
  - – Features
    - -- Supports the widest variety of networks and interconnects
    - -- Allows for the selection of interconnects at run time with no need to recompile
    - -- Provides the capability to write applications once and deploy across multiple operating system and hardware topologies
    - -- Includes CPU binding features that are well suited to GPU-aware applications
  - – Benefits
    - -- Enables development of applications that will run on more platforms
    - -- Reduces testing, maintenance, and support costs
    - -- Creates strategic flexibility

Product capabilities

Multicore awareness: IBM Platform MPI provides three key methods to optimize performance on multicore systems:

- Direct shared memory implementation of MPI collective operations (SHMEM)
- Policy-based process-to-core affinity binding, including support for LSF syntax
- Multicore-aware copying and encoders/decoders optimized for intercore memory hierarchy

Comprehensive debugging and troubleshooting tools: Platform MPI incorporates an extensive set of tools, including verification and test tools, application tracing and timing facilities, and performance counters with message sizes and counts. These tools enable application developers and users to maximize application performance.

Tracing and monitoring: MPI-related monitoring presentation can be selected through environment variables to determine presentation of timing and trace information, with no recompilation or relinking of the application. As a result, there is no need to recompile or relink the application.

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

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 run time. This maximizes network efficiency so that processes get the data they need quickly.

Simplified application development: Platform MPI enables use of a single MPI implementation and a single executable to support a wide array of interconnects, with dynamic runtime selection of interconnect. With Platform MPI, you can run a single application across multiple architectures, Linux distributions, and interconnects. It eliminates the need to recompile applications and MPI libraries, while providing full support for dynamically linked libraries. This means there is no need to recompile for every compiler or interconnect combination.

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.

Support for popular debuggers: Platform MPI fully supports Etnus TotalView analysis tools, Allinea's distributed debugging tool (DDT), and standard GNU gdb.

Integration with IBM PE Runtime Edition V1.2 allows users to take advantage of the many tools available in IBM PE Runtime Edition

Accessibility by people with disabilities

A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

   http://www.ibm.com/able/product_accessibility/index.html

Product positioning

IBM Platform MPI is a high-performance, production-quality messaging passing interface (MPI) designed to optimize technical computing parallel applications in a distribution computing environment.

IBM Platform MPI provides a single high-performance MPI implementation operating across a broad set of platforms, operating systems, and environments, supporting a broad set of interconnects and other technologies, such as GPUs and FCA.

IBM Platform MPI is part of the IBM Platform Computing family of products, which includes IBM Platform LSF and IBM Platform Symphony® .

The IBM Platform LSF product family provides powerful workload management for demanding, distributed, and mission-critical high-performance technical computing environments. It includes a comprehensive set of workload management capabilities, all designed to work together to address high performance computing needs.

IBM Platform Symphony is an enterprise-class grid manager for running distributed application services on a scalable, shared, heterogeneous grid. It accelerates a wide variety of compute and data-intensive applications, quickly computing results while making optimal use of available infrastructure.

IBM Platform MPI primarily competes with the following open source and commercial MPIs:

- MPICH2
- MVAPICH2
- Intel™ MPI
- MS MPI (Microsoft)
- OpenMPI

Relative to other MPI offerings, IBM Platform MPI delivers the following unique advantages:

- Portability: Platform MPI supports a multitude of different interconnects (TCP, MX, InfiniBand, and 10GiGE), Linux and Windows operating systems, and FCA and GPU/GPU-Direct 2.0 functionality. Developers, therefore, do not need to build their MPI applications using different MPIs to support a specific interconnect or other performance feature. A single MPI application built with Platform MPI is all that is necessary to use these features. And upgrading MPI versions is as simple as pointing MPI_ROOT to a different location. This results in fewer qualification runs and increases engineer productivity.
- Robustness: Platform MPI includes production-quality resource cleanup, including support for signal propagation to all ranks and stdio processing. This enables production-quality execution and version-to-version compatibility.
- Performance: Other MPIs are designed to highlight specific technologies (for example, MVAPICH and InfiniBand, IntelMPI and Intel's CPUs, and MS-MPI and WindowsHPC). However, Platform MPI demonstrates consistently high performance across multiple platforms. It also includes a robust set of runtime tools to help profile applications and tune them for optimal performance.
- Application support: Platform Computing works closely with our ISV partners to ensure that our technology is tightly integrated. Platform MPI is widely distributed as part of the ISV application, making it easier for the ISV and application developer to debug and support their software.

Reference information

Refer to Preview Announcement 212-392, dated October 03, 2012 .

Program number

Program number	VRM	Program name
5725-G83	9.1.0	IBM Platform MPI

Offering Information

Product information is available via the Offering Information website

http://www.ibm.com/common/ssi

Also, visit the Passport Advantage® website

http://www.ibm.com/software/passportadvantage

Publications

The following technical documents will be available for IBM Platform MPI V9.1:

- IBM Platform MPI User Guide
- Release Notes for IBM Platform MPI: Linux
- Release Notes for IBM Platform MPI: Windows

The IBM Publications Center

http://www.ibm.com/shop/publications/order

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided. Payment options for orders are via credit card (in the US) or customer number for 50 countries. A large number of publications are available online in various file formats, and they can all be downloaded by all countries, free of charge.

Technical information

Specified operating environment

Hardware requirements

IBM Platform MPI V9.1 is supported on IBM System x iDataPlex® and other rack-based servers and is also supported on non-IBM x86 and x64 servers.

Supported interconnect and protocols include:

- GigE (Linux): RDMA, uDAPL, TCP/IP
- GigE (Windows) TCP/IP on x86-64
- 10GigE (Linux): TCP, uDAPL, iWarp and RDMA, including RoCE
- Myrinet (Linux): GM and MX on X86-64
- InfiniBand (Windows): WinOF 2.x, IBAL, WSD, SDR, DDR, QDR, and FDR
- InfiniBand (Linux): OFED1.1, 1.2, 1.3, 1.4, and 1.5, PSM, uDAPL on X86-64, and SDR, DDR, QDR, and FDR Mellanox FCAs

In addition, Platform MPI supports GPU-Direct 2.0 on Linux .

Software requirements

Platform MPI V9.1 includes support for the following operating systems:

- Red Hat Enterprise Linux 4.6, 5.x, and 6.x
- SUSE Linux Enterprise Server 10 and 11
- CentOS 5.x
- Microsoft Windows XP/Vista, Server 2003/Server 2008
- HPC Server 2008, Windows 7

For building an MPI application, you will need:

- GNU 3.2, 3.4, 4.1 (with glibc 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, and 2.11)
- Intel 9.x, 10.x, and 11.x
- PathScale 2.3, 2.4, 2.5, 3.1, and 3.2
- Portland Group 7.x, 8.x, and 9.x

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a readme file, or other information published by IBM , such as an announcement letter. Documentation and other program content may be supplied only in the English language.

Companion products

The following products and services available from IBM complement Platform MPI V9.1:

- The IBM Platform LSF product family provides powerful workload management for demanding, distributed, and mission-critical high performance technical computing environments. It includes a comprehensive set of workload management capabilities, all designed to work together to address high performance computing needs.
- Clusters consisting of IBM System x servers are an ideal hardware platform for Platform MPI. Platform MPI is certified to run on the M4 generation of IBM System x iDataPlex and other rack-based servers.
- Depending on the nature of the client requirement, IBM Platform MPI deployments can involve software development and integration services. With its breadth of services capabilities, IBM is uniquely positioned to help clients integrate applications and be up and running quickly to get maximum value from their grid computing investment.
- IBM PE Runtime Edition provides the core components needed to enable a user to develop, debug, and execute parallel applications.

Limitations

Refer to the **IBM Platform MPI release notes** included in the documentation.

Performance considerations

IBM Platform MPI performance is dependent on a number of factors, including CPU performance, network bandwidth, network quality of service (QoS), and the skill level of the developer writing MPI code and the basic algorithms.

IBM Electronic Support

The IBM Support Portal is your gateway to technical support. This includes IBM Electronic Support tools and resources, for software and hardware, to help save time and simplify support. The Electronic Support tools can help you find answers to questions, download fixes, troubleshoot, automate data collection, submit and track problems through the Service Request online tool, and build skills. All these tools are made available through your IBM support agreement, at no additional charge.

- Read about the Electronic Support portfolio of tools:

    http://ibm.com/electronicsupport
- Access the IBM Support Portal:

    http://ibm.com/support
- Access the online Service Request tool:

    http://ibm.com/support/servicerequest

Planning information

Customer responsibilities

The customer must provide at least the minimum hardware and software environments in which Platform MPI will operate as stated in the Platform MPI Users Guide. It is recommended that the customer assign a developer who has responsibility for planning, installing, maintaining, and administering Platform MPI.

Packaging

IBM Platform MPI V9.1 is distributed as a single DVD media option or available for electronic download in two eAssemblies as follows:

- IBM International Program License Agreement (L-ACHG-8XWRWZ) in multiple languages
- Required files
  - IBM Platform MPI Entitlement File
  - IBM Platform MPI 9.1 Release Notes for Linux
  - IBM Platform MPI 9.1 Release Notes for Windows
  - IBM Platform MPI User's Guide
- Platform MPI Installation package for General Release:
  - Linux , 64-bit OS
  - Linux , 32-bit OS
  - Windows

This program, when downloaded from a website, contains the applicable IBM license agreement and License Information, if appropriate, and will be presented for acceptance at the time of installation of the program. For future reference, the license and License Information will be stored in a directory such as LICENSE.TXT.

Security, auditability, and control

IBM Platform MPI uses the security and auditability features of the system in which it is installed.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Software Services

IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

To learn more about IBM Software Services or to contact a Software Services sales specialist, visit

   http://www.ibm.com/software/sw-services/

Ordering information

This product is only available via Passport Advantage . It is not available as shrinkwrap.

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Product group: IBM Platform Computing
  Product Identifier Description (PID)
  IBM Platform MPI          5725G83

Product category: Other Software
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Charge metric

Program name	Part number or PID number	Charge metric
IBM Platform MPI	5725-G83	Managed core resource value unit (RVU) and 12 months subscription and support

Resource Value Unit (RVU)

RVU is a unit of measure by which the program can be licensed. RVU Proofs of Entitlement are based on the number of units of a specific resource used or managed by the program. Licensee must obtain sufficient entitlements for the number of RVUs required for licensee's environment for the specific resources as specified in the program specific table. RVU entitlements are specific to the program and the type of resource and may not be exchanged, interchanged, or aggregated with RVU entitlements of another program or resource. Refer to the program specific RVU table.

Notes :

- Some programs may require licenses for the resources available to and the resources being managed by the program. In that case, the following applies. In addition to the entitlements required for the resources used by the program directly, licensee must obtain entitlements for this program sufficient to cover the resources managed by the program.
- Some programs may be licensed on a managed basis only. In that case, the following applies. Instead of the entitlements required for the resources used by the program directly, licensee must obtain entitlements for this program sufficient to cover the resources managed by the program.

The program in this announcement has Value Unit-Based pricing:

Program number	Program name	Value Unit exhibit
5725-G83	Platform MPI	VUE139

For this program, the resource for the purpose of the RVU calculation are Activated Processor Cores managed by the program. An *Activated Processor Core* is a processor core that is available for use in a physical or virtual server, regardless of whether the capacity of the processor core can be or is limited through virtualization technologies, operating system commands, BIOS settings, or similar restrictions. Licensee can deploy the program using either Full Capacity licensing or Virtualization Capacity (Sub-Capacity) licensing according to the Passport Advantage Sub-Capacity Licensing Terms (see webpage below). If using Full Capacity licensing, each Activated Processor Core in the physical hardware environment managed by the program must be counted, except for those servers from which the program permanently no longer manages. If using Virtualization Capacity licensing, the Virtualization Capacity License Counting Rules at the following website defines how many Activated Processor Cores must be counted

http://www-01.ibm.com/software/lotus/passportadvantage/
Counting_Software_licenses_using_specific_virtualization_technologies.html

Resource Value Unit Conversion Table:

```
From 1 to 2,500 Resources, 1.0 (RVU/UVU) per Resource
From 2,501 to 10,000 Resources, 2,500 RVUs plus 0.8 RVUs per Resource above
2,500
From 10,001 to 50,000 Resources, 8,500 RVUs plus 0.6 RVUs per Resource
above 10,000
From 50,001 to 150,000 Resources, 32,500 RVUs plus 0.4 RVUs per Resource
above 50,000
For more than 150,000 Resources, 72,500 RVUs plus 0.2 RVUs per Resource
above 150,000
```

Passport Advantage

```
                                                      Part
Program name/Description                              number

IBM PLATFORM MPI V9.1 MULTIPLATFORM ENGLISH MEDIA PACK    AJ00SEN
```

Passport Advantage customer: Media pack entitlement details

Customers with active maintenance or subscription for the products listed are
entitled to receive the corresponding media pack.

```
Entitled maintenance offerings                       Part
description                                           number

IBM PLATFORM MPI RVU INITL FT LIC + S&S 12 MO         D0Q0BLL
IBM PLATFORM MPI RVU LIC + SW S&S 12 MO               D0Q15LL
IBM PLATFORM MPI RVU SUBSQ FT LIC+S&S 12 MO           E0DWZLL


Media packs                                          Part
description                                           number

IBM PLATFORM MPI V8.3 MULTIPLATFORM ENGLISH MEDIA PACK    AJ006EN
```

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Maintenance) with the initial license acquisition of each program acquired. The initial
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use of the program and an annual renewable charge for the enhanced support that

includes telephone assistance (voice support for defects during normal business hours), as well as access to updates, releases, and versions of the program as long as support is in effect.

License Information form number

L-ACHG-8XWRWZ

The program's License Information will be available for review on the IBM Software License Agreement website

   http://www.ibm.com/software/sla/sladb.nsf

Limited warranty applies

Yes

Limited warranty

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IBM provides you with access to IBM databases containing information on known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, consult the IBM Software Support Handbook found at

   http://www.ibm.com/support/handbook

IBM will maintain this information for at least one year after the original licensee acquires the program (warranty period).

Money-back guarantee

If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

For clarification, note that (1) for programs acquired under the IBM International Passport Advantage offering, this term applies only to your first acquisition of the program and (2) for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

Volume orders (IVO)

No

Passport Advantage applies

Yes, and through the Passport Advantage website at

   http://www.ibm.com/software/passportadvantage

Software Subscription and Support applies

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While your Software Subscription and Support is in effect, IBM provides you assistance for your routine, short duration installation and usage (how-to) questions, and code-related questions. IBM provides assistance via telephone and, if available, electronic access, only to your information systems (IS) technical support personnel during the normal business hours (published prime shift hours) of your IBM support center. (This assistance is not available to your end users.) IBM provides Severity 1 assistance 24 hours a day, 7 days a week. For additional details, consult your IBM Software Support Handbook at

http://www.ibm.com/support/handbook

Software Subscription and Support does not include assistance for the design and development of applications, your use of programs in other than their specified operating environment, or failures caused by products for which IBM is not responsible under the applicable agreements.

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http://www.ibm.com/software/passportadvantage

IBM Operational Support Services -- SoftwareXcel

No

System i Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

Not applicable.

Statement of good security practices

IT system security involves protecting systems and information through prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered, destroyed, or misappropriated or can result in misuse of your systems to attack others. Without a comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective. IBM does not warrant that systems and products are immune from the malicious or illegal conduct of any party.

IBM Electronic Services

Electronic Service Agent™ and the IBM Electronic Support web portal are dedicated to providing fast, exceptional support to IBM Systems customers. The IBM Electronic

Service Agent tool is a no-additional-charge tool that proactively monitors and reports hardware events, such as system errors, performance issues, and inventory. The Electronic Service Agent tool can help you stay focused on your company's strategic business initiatives, save time, and spend less effort managing day-to-day IT maintenance issues. Servers enabled with this tool can be monitored remotely around the clock by IBM Support all at no additional cost to you.

Now integrated into the base operating system of AIX® 5.3, AIX 6.1, and AIX 7.1, Electronic Service Agent is designed to automatically and electronically report system failures and utilization issues to IBM , which can result in faster problem resolution and increased availability. System configuration and inventory information collected by the Electronic Service Agent tool also can be viewed on the secure Electronic Support web portal, and used to improve problem determination and resolution by you and the IBM support team. To access the tool main menu, simply type "smitty esa_main", and select "Configure Electronic Service Agent ." In addition, ESA now includes a powerful Web user interface, giving the administrator easy access to status, tool settings, problem information, and filters. For more information and documentation on how to configure and use Electronic Service Agent , refer to

   http://www.ibm.com/support/electronic

The IBM Electronic Support portal is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. This portal enables you to gain easier access to IBM resources for assistance in resolving technical problems. The My Systems and Premium Search functions make it even easier for Electronic Service Agent tool-enabled customers to track system inventory and find pertinent fixes.

Benefits

Increased uptime: The Electronic Service Agent tool is designed to enhance the Warranty or Maintenance Agreement by providing faster hardware error reporting and uploading system information to IBM Support. This can translate to less wasted time monitoring the "symptoms," diagnosing the error, and manually calling IBM Support to open a problem record. Its 24 x 7 monitoring and reporting mean no more dependence on human intervention or off-hours customer personnel when errors are encountered in the middle of the night.

Security: The Electronic Service Agent tool is designed to be secure in monitoring, reporting, and storing the data at IBM . The Electronic Service Agent tool securely transmits either via the Internet (HTTPS or VPN) or modem, and can be configured to communicate securely through gateways to provide customers a single point of exit from their site. Communication is one way. Activating Electronic Service Agent does not enable IBM to call into a customer's system. System inventory information is stored in a secure database, which is protected behind IBM firewalls. It is viewable only by the customer and IBM . The customer's business applications or business data is never transmitted to IBM .

More accurate reporting: Since system information and error logs are automatically uploaded to the IBM Support center in conjunction with the service request, customers are not required to find and send system information, decreasing the risk of misreported or misdiagnosed errors. Once inside IBM , problem error data is run through a data knowledge management system and knowledge articles are appended to the problem record.

Customized support: Using the IBM ID entered during activation, customers can view system and support information in the "My Systems" and "Premium Search" sections of the Electronic Support Web site at

   http://www.ibm.com/support/electronic

My Systems provides valuable reports of installed hardware and software using information collected from the systems by Electronic Service Agent . Reports are available for any system associated with the customer's IBM ID. Premium

Search combines the function of search and the value of Electronic Service Agent information, providing advanced search of the technical support knowledgebase. Using Premium Search and the Electronic Service Agent information that has been collected from your system, customers are able to see search results that apply specifically to their systems.

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