AIX Version 6.1

Open, secure, scalable, reliable UNIX operating system for IBM Power Systems servers

Highlights

- IBM's well-proven, scalable, open standards-based UNIX operating system
- Features for virtualization, security, availability and manageability designed to make IBM® AIX® 6 even more flexible, secure and available than previous versions
- Provides the support and exploitation of the IBM POWER® technology and virtualization to help deliver superior performance, increase system utilization and efficiency, provide for easy administration and reduce total costs
- Available in three Editions for even more capability and flexibility

AIX, the future of the UNIX operating system

Businesses today need to maximize the return on investment in information technology. Their IT infrastructure should have the flexibility to quickly adjust to changing business computing requirements and scale to handle ever expanding workloads—without adding complexity. But just providing flexibility and performance isn't enough; the IT infrastructure also needs to provide rock-solid security and near-continuous availability and while managing energy and cooling costs.

These are just some of the reasons why more and more businesses are choosing the AIX operating system (OS) running on IBM systems designed with Power Architecture® technology. With its proven scalability, advanced virtualization, security, manageability and reliability features, the AIX OS is an excellent choice for building an IT infrastructure. And, AIX is the only operating system that leverages decades of IBM technology innovation designed to provide the highest level of performance and reliability of any UNIX operating system.

AIX 6 is binary compatible with previous versions of the AIX OS, including AIX 5L™ and even earlier versions of AIX. This means that applications that ran on earlier versions will continue to run on AIX 6—guaranteed.[1] AIX 6 is an open standards-based UNIX OS that is designed to comply with the Open Group's Single UNIX Specification Version 3.

AIX 6 runs on systems based on POWER4, PPC970, POWER5, POWER6® and POWER7®, including the latest generation of POWER7 processor, POWER7+™. Most of the new features of AIX 6 are available on the earlier POWER processor-based platforms, but the most capability is delivered on systems built with the POWER6 and POWER7 processors. The AIX OS is designed for the IBM Power®, System p®, System i®, System p5®, System i5®, eServer™ p5, eServer pSeries® and eServer i5 server product lines, as well as IBM BladeCenter® blades based on Power Architecture technology and IBM IntelliStation® POWER workstations.

AIX 6 extends the capabilities of the AIX OS to include new virtualization approaches including the ability to relocate applications between systems without restarting the application, new security features to improve and simplify security administration, new availability features inspired by IBM legacy systems and numerous features designed to make the AIX OS easier and less expensive to manage. This AIX release underscores IBM's firm commitment to long-term UNIX innovations that deliver business value. This release of AIX continues the evolution of the UNIX OS that started in Austin, Texas, with AIX on the RT PC and the RISC Systems/6000 (RS/6000®) over 20 years ago.

AIX editions

AIX 6 is available in three different editions: an **Express Edition** that includes the functionality of AIX **Standard Edition** but has some restrictions on vertical scalability, a Standard Edition that includes AIX with no vertical scalability limits and an AIX Enterprise Edition that includes AIX 6, the Workload Partitions Manager™ for AIX and the IBM Systems Director **Standard Edition** Workload Partitions (WPAR) Manager for AIX, PowerSC™, SmartCloud Entry, VMControl Enterprise Edition, AIX Dynamic System Optimizer and IBM Tivoli® Monitoring.

- **AIX Standard Edition:** The AIX 6 Standard Edition is the edition that many people would think of as "AIX." The vertical scalability of AIX Standard edition is only limited by the current maximum capabilities of the Power Systems™ platform of up to 64 cores or 128 threads in a single partition. AIX Standard Edition is relevant for most customer workloads.
- **AIX Enterprise Edition:** The AIX 6 Enterprise Edition includes all the UNIX capabilities of AIX Standard Edition, but also includes all the requirements needed to effectively manage, optimize and secure a Power Systems infrastructure including one that is being used in a private cloud deployment environment. AIX 6 Enterprise Edition delivers significant management enhancements that come with the inclusion of WPAR Manager, IBM Systems Director Standard Edition, VMControl Enterprise Edition and IBM Tivoli Monitoring as part of the offering. In addition, PowerSC, a new member of the AIX 6 Enterprise Edition offering provides a security and compliance solution optimized for virtualized environments on Power Systems. Also included is the new AIX Dynamic System Optimizer (DSO) product that improves system performance and throughput. And finally, as more and more clients begin to implement private cloud solutions, AIX 6 Enterprise Edition makes it more easily to do so with the inclusion of SmartCloud Entry. SmartCloud Entry enables data center managers to quickly deploy self-service provisioning of virtualized workloads with a simple interface that provides oversight while increasing IT efficiency and lowering administration costs. AIX6 Enterprise Edition includes all of these products under a single ordering and support structure. AIX 6 Enterprise Edition is the right offering for those clients looking to optimize their Power Infrastructure in order to receive the biggest return on their investment.

- **AIX Express Edition:** The AIX 6 Express Edition provides the same functional capabilities of AIX Standard, at a lower price. The vertical scalability of AIX Express Edition is limited to a maximum of 4 cores and 8 GB of memory per core in a single partition. Clients can configure the system with multiple partitions running AIX Express Edition, but each partition is limited to a maximum of 4 cores and a total of 32 GB of memory per partition. AIX Express Edition is primarily intended for clients who do not need the extreme levels of vertical scalability of AIX Standard or Enterprise Editions particularly when consolidating a number of smaller workloads onto a larger server. AIX Express Edition is also suitable for clients with small workloads on platforms such as entry or Blade servers.

All editions of AIX 6 are available on all models in the IBM Power Systems hardware product line. Clients may mix the different editions on a single server.

AIX Workload Partitions

- **Workload Partitions:** AIX 6 introduces a new, software-based virtualization approach called AIX Workload Partitions (WPARs). WPARs enable the creation of multiple virtual AIX 6 environments inside of a single AIX 6 instance. Each WPAR can have a unique "root" administrator, network addresses, file systems and security context (users and groups). WPARs share a regulated portion of the processing and I/O resources of the global instance but are isolated from the processes and users in other WPARs or in the global instance. WPARs are unique in that they are the only software-based virtualization approach designed from the beginning to be movable between systems. This capability, called Live Application Mobility, is described below.
- You can use AIX Workload Partitions to save administrative overhead when consolidating systems, by reducing the number of AIX instances that have to be managed. For example, instead of applying patches to multiple copies of AIX 6, using WPARs, you can patch the global instance, and all WPARs inherit that same patch level. This helps manage growth by allowing you to concentrate on managing applications instead of spending time on repetitive administration tasks.
- Each AIX Workload Partition can be separately administered from other WPARs in the system. For example, each WPAR can have unique users and groups and a unique root administrator. The root user for a WPAR cannot take actions that would affect the global instance or other WPARs. This isolation provides for further savings through delegation of administrative work.
- AIX Workload Partitions share a single AIX 6 instance, so there is less isolation than there is with logical partitions (LPAR) in which each LPAR has its own independent copy of AIX 6. Feedback from users of AIX 6 is that WPARs provide enough isolation for many workloads—at a substantial savings of administrative effort. WPARs can be used inside of LPARs, allowing the combination of the two technologies to leverage the superior isolation of LPARs with the administrative ease of WPARs.
- AIX 6 provides for two types of Workload Partitions—System WPARs and Application WPARs:
  - System WPARs look like independent AIX 6 instances. They have their own copies of many system services like *init* and *mail*, they can be logged into via telnet, and they have their own users and groups.
  - Application WPARs are much simpler; an Application WPAR is simply a wrapper around an application that makes it more manageable. Application WPARs run inside of the global instance and do not have their own administrator, file systems or security context. All processes running inside of an Application WPAR can be grouped together for management, including resource controls. Because Application WPARs are not running their own copies of system processes like *init*, they have an even smaller resource footprint than System WPARs.

- AIX 6 includes Workload Partitions as part of the base operating system. WPARs can be created and managed on a single AIX 6 instance using SMIT and command line interfaces. IBM also provides a new licensed program product, the IBM PowerVM® Workload Partitions Manager for AIX (WPAR Manager) that lets you manage WPARs across multiple systems. The WPAR Manager product is available separately; it is not part of AIX 6 Express or Standard Edition. The WPAR Manager is included with AIX Enterprise Edition.
- **SAN devices support:** Workload Partitions support SAN devices that belong directly to the WPAR. The SAN devices can be used to hold the WPAR system file systems and application data and are supported with Live Application Mobility. This capability was introduced with AIX 6 Technology Level 3.
- **Live Application Mobility:** Workload Partitions can be moved from one system to another without restarting the application or causing significant disruption to the application end user. This process is called Live Application Mobility, a feature of AIX 6 and the Workload Partitions Manager for AIX (WPAR Manager). During the relocation process, the WPAR Manager first creates a checkpoint of the Workload Partition, then the memory and other WPAR configuration information is moved to the target system, and finally, the WPAR is resumed on the new system—right where it left off. Applications do not have to be restarted because the entire WPAR, including the application context, has been moved to the target system. The WPAR Manager will also typically be used to control the relocation, but command line interfaces can also be used. Live Application Mobility has been enhanced to provide near-instantaneous transfer of a WPAR from one system to another—transparently moving applications without substantially affecting end users. Live Application Mobility is designed to provide several benefits: first, it allows some outages to be avoided by moving the application off of a system that needs to be shut down for maintenance; second, it can be used to balance workloads across several systems—automatically or manually; and finally, it can be used to move workloads off servers during nonpeak periods so that those servers could be turned off—saving energy. AIX Live Application Mobility is a feature of AIX 6 and the WPAR Manager and can be used on any hardware supported by AIX 6.

Security features

Providing for a secure computing environment has always been a key goal for the AIX OS. AIX 6 is designed to be compliant under the Common Criteria at Common Access Protection Profile/Evaluation Assurance Level 4+, including the Role Based Access Control Protection Profile (RBACPP) and the Labeled Security Protection Profile (LSPP). It includes many new features that can increase security while reducing the effort needed to provide a secure infrastructure:

- **Role Based Access Control:** Role Based Access Control (RBAC) provides improved security and manageability by allowing administrators to grant authorization for management of specific AIX 6 resources to users other than root. RBAC can also be used to associate specific management privileges with programs, which can reduce the need to run those programs under the root user or via setuid. RBAC improves security by reducing the number of root users required to manage systems. It can reduce administrative costs and improve administrative efficiency by allowing secure delegation of routine administrative tasks to nonroot users.
- **Trusted AIX:** Trusted AIX extends the security capabilities of the AIX OS by integrating compartmentalized, multilevel security (MLS) into the base operating system to meet critical government and private industry security requirements. Trusted AIX is implemented as an installation option that can provide the highest levels of label-based security to meet critical government and private industry security requirements. Trusted AIX supports various MLS features such as partitioned directories, trusted networking and labeled printing.
- **Encrypting Filesystem:** The IBM Enhanced Journaled Filesystem Extended (JFS2) adds even greater data security with the capability to encrypt the data in a file system. Clients can select from a number of different encryption algorithms. The encrypted data can even be backed up in encrypted format, reducing the risk of data being compromised if backup media is lost or stolen. The Encrypting Filesystem can even help prevent the compromise of data by root-level users. The Encrypting Filesystem does not require significant additional administrative effort because the key management is automatic and fully integrated into the login authentication process.

- **AIX Security Expert:** The AIX Security Expert was introduced with Technology Level 5 update to the AIX 5.3 OS, and provides clients with the capability to manage more than 300 system security settings from a single interface. To configure security on a system, you start with a template that provides the initial configuration and then customize to fit security requirements. The Security Expert provides four templates: high, medium or low security or a Sarbanes Oxley template designed to help you become compliant with the security requirements of the Sarbanes Oxley Act. Once the Security Expert has been used to configure security on a system, you can export those security settings and use them to set other systems identically. With AIX 6, you can even store these security configurations directly in a Lightweight Directory Access Protocol (LDAP) directory—simplifying implementation of consistent security across an entire enterprise.
- **Secure by Default Installation Option:** The AIX 6 installation process will offer a new option, Secure by Default that enables only the minimal number of system and network services to provide the maximum amount of security. Secure by Default works best when used in conjunction with the AIX Security Expert to tightly control the security configuration of each system.
- **Trusted Execution:** In Trusted Execution mode, AIX 6 will verify the integrity programs at execution time. This can increase security by reducing the possibility that tampered programs could be used to compromise the security of the system. A signature (Secure Hash Algorithm (SHA) 256/RSA) database for important system files is created automatically as part of the regular AIX 6 install. The Trusted Execution tool can be used to check the integrity of the system against the database. Also the administrator can define policies such that the loads of files listed in the database are monitored and execution/loads not allowed if hashes do not match. Additionally the administrator can lock the signature database or the files in the database from being modified by anyone in the system, including root.
- **Support for Long Pass Phrases:** AIX 6 will support greater than eight-character passwords for authentication of users. These releases will provide for storing of passwords using encryption algorithms such as SHA/256/512, MD5 etc. System wide controls can be configured by the administrator to choose the algorithm as well as the size of the password which could be up to 255 characters. Enhanced support will also include support for pass phrases.

In addition to these new features, AIX 6 provides a wide range of other integrated security features—all designed to provide a high level of confidence in the safety of mission-critical processes and applications.

Near-continuous availability features

Over the years, the AIX OS has included many reliability features inspired by IBM legacy technologies. The release of AIX 6 introduces unprecedented availability features to the UNIX market that can help reduce planned and unplanned outages. These features include:

- **Concurrent AIX Kernel Updates:** Concurrent AIX updates provides a new capability to deliver some kernel updates as interim fixes that will not require a system reboot to put into effect. This can reduce the number of unplanned outages required to maintain a secure, reliable system.
- **Kernel Support for POWER6 and POWER7 Storage Keys:** This AIX 6 feature brings a mainframe-inspired reliability capability to the UNIX market for the first time. Enabled by the POWER6 and POWER7 processors, Storage Keys can reduce the number of intermittent outages associated with undetected memory overlays inside the AIX kernel and kernel extensions. Applications can also use the Storage Keys feature to increase the reliability of large, complex applications running under the AIX 6 releases.
- **Dynamic Tracing:** AIX 6 provides a new dynamic tracing capability that can simplify debugging complex system or application code. This dynamic tracing facility was introduced through a new tracing command, probevue, which allows a developer or system administrator to dynamically place probes in existing application or kernel code, without requiring special source code or even recompilation. probevue is very flexible, allowing dynamic specification of the data to be captured at probe points and providing the ability to associate execution preconditions with a given probe. probevue can be used with programs written in the C, C++ and Java programming languages.
- **Nonintrusive Service Aids:** AIX 6 service aids are designed to minimally impact performance and availability. Second Failure Data Capture (SFDC) technology involves building highly tunable diagnostic and data capture features into the operating system, but only enabling them after problem diagnosis has started. The result is faster, less disruptive problem determination, without the need to install special "debug" code. AIX 6 also introduces a mainframe-inspired live dump facility, which allows selected subsystems to dump their diagnostic information for subsequent service analysis, without requiring a full system dump and partition outage. For those problems that still require a partition restart in order to recover, AIX 6 provides a firmware-assisted dump mode on systems based on POWER6 and POWER7 processor technology. In this new mode, AIX 6 cooperates with system firmware to write the First Failure Data Capture (FFDC) information to the dump device using the restarted AIX 6 image, rather than writing to the dump device at the time of the failure. The result is fewer dump failures, which can enable quicker problem determination and resolution.
- **Enhanced Software First Failure Data Capture:** IBM has included many availability features in the AIX 5.3 and earlier releases. One of the key innovations used to improve the reliability, availability and serviceability features of the AIX OS was the introduction of First Failure Data Capture (FFDC) technology. As a concept borrowed from IBM hardware reliability features, FFDC gathers diagnostic information about a problem at the time the problem occurs—dramatically reducing the need to recreate the problem (and impact performance and availability) at a later time to generate diagnostic information. Because clients do not typically interact with this technology, it is one of the "hidden innovations" that is largely unseen but is designed to help increase the overall reliability, serviceability and most important, availability of the AIX OS. AIX 6 builds on the FFDC capabilities introduced in previous AIX releases by introducing even more instrumentation to provide real time diagnostic information.

- **Functional Recovery Routines:** When many operating systems other than IBM z/OS® encounter a severe problem inside the heart of the OS, they crash. AIX 6 is the first UNIX OS to introduce new technology that can, in some cases, recover from errors that would otherwise cause the operating system to crash. This is just another example of a feature inspired by IBM's legacy technology and designed to improve the reliability of AIX, our premier UNIX OS.

Built-in manageability features in AIX 6

Many of the features already described such as Workload Partitions, Live Application Mobility, Role Based Access Control, AIX Security Expert, and AIX Concurrent Updates can significantly improve the administrative efficiency of managing the AIX OS, particularly as AIX environments grow. AIX 6 also includes additional features specifically intended to improve the manageability of the AIX OS:

- **IBM Systems Director Console for AIX:** This management interface allows administrators to manage AIX 6 remotely through a browser. The IBM Systems Director Console for AIX (console) provides responsive Web access to common systems management tools such as the Systems Management Interface Tool (SMIT). The console is included as part of AIX 6—no other products are required to use it other than a Web browser. The console is named after the IBM Systems Director because it is built on the same graphical user interface as the IBM Systems Director. The console also provides the capability to securely run administrative commands on multiple systems.
- **AIX Runtime Expert:** The AIX runtime expert allows administrators to extract existing AIX configuration settings to a profile that can be applied to another AIX system to set that system to the same configuration as the first system. Additionally, profiles can be compared to the current system either to identify unauthorized configuration changes or to preview which settings would be changed by applying the profile. This capability was introduced with AIX 6 Technology Level 4.
- **Automatic Variable Page Size for POWER6 and POWER7:** AIX 6 will automatically manage the size of pages used when it is running on a system based on POWER6 or POWER7 processors. AIX 6 will automatically use 4K, 64K or a combination of those page sizes to optimize performance without administrative effort. This self-tuning feature can be controlled by the administrator but the default behavior is to let AIX 6 manage page sizes automatically.
- **Solution Performance Tuning:** The default tuning parameters for AIX 6 have been changed to provide much better performance for most applications right out of the box. In many cases, administrators can get good applications performance without the need to make any tuning changes.
- **Name Resolver Caching Daemon:** This daemon caches requests to resolve a hostname, service or netgroup to improve the efficiency of subsequent requests for the same information. Use of this facility can dramatically improve the performance of applications that are dependent on repeated requests for name resolution.
- **Graphical Installation:** This new installation option is intended primarily for use by administrators with limited AIX installation experience. Graphical Installation simplifies the installation process but includes options to navigate to the traditional installation menus if required.
- **Network Installation Manager Support for NFSv4:** The Network Installation Manager (NIM) has been enhanced to provide additional security features and flexibility by enabling the use of NFS version 4. NIM can use NVSv4 to provide stronger, Kerberos-based security during the installation of AIX 6 and other software.
- **IBM Systems Director Agent:** The agent for IBM Systems Director is included in the base installation media for AIX 6 starting with Technology Level 3. Installing the agent simplifies integration with IBM Systems Director, the strategic platform management tool for IBM Power Systems.

Platform support

AIX Version 6.1 will run on systems based on POWER4, PPC970, POWER5, POWER6 and POWER7 processors. Most features of AIX 6 are available on all supported hardware. A few features are only available when AIX 6 is running on a system built with POWER6 or POWER7 processors. The table below lists selected features of AIX 6 and whether those features require POWER6 or later processors.

AIX 6 only supports the 64-bit kernel. Thirty-two-bit and 64-bit applications that ran on AIX 5L will continue to run unchanged on AIX 6, but 32-bit kernel extensions and device drivers are not supported on AIX 6.

AIX 6 Feature	Platforms Supported
AIX Workload Partitions	POWER4, PPC970, POWER5, POWER6 and POWER7
Live Application Mobility	POWER4, PPC970, POWER5, POWER6 and POWER7
Application Storage Keys	POWER6 and POWER7 (also supported by AIX 5.3)
Kernel Storage Keys	POWER6 and POWER7
Automatic Variable Page Size	POWER6 and POWER7
Firmware Assisted Dump	POWER6 and POWER7
Hardware Decimal Floating-Point	POWER6 (also supported by AIX 5.3)
Role Based Access Control	POWER4, PPC970, POWER5, POWER6 and POWER7
Encrypting Filesystem	POWER4, PPC970, POWER5, POWER6 and POWER7
Trusted AIX	POWER4, PPC970, POWER5, POWER6 and POWER7
probevue Dynamic Tracing	POWER4, PPC970, POWER5, POWER6 and POWER7

IBM systems based on the POWER6 or POWER7 processors provide additional virtualization capabilities of the PowerVM feature that are supported by AIX 6. These features include:

- **PowerVM Live Partition Mobility:** This new capability of POWER6 processor-based systems allows an entire logical partition to be relocated from one server to another while end users are using applications running in the partition. The relocation is transparent to the end user and occurs with no application downtime. Like Live Application Mobility, Live Partition Mobility can enable increased availability, workload balancing and energy savings.
- **Active System Optimizer:** Active System Optimizer, a new subsystem designed to autonomically improve the performance of workloads. Performance improvements may vary depending on configuration and workload. Measurements should be taken before running the subsystem in a production environment. Active System Optimizer support is only available on Power7 systems.

- **Virtual Processor Management Scaled Throughput Option:** A new AIX Virtual Processor Management option optimizes scaled throughput. Scaled throughput is throughput/utilization. The new optimization point exploits Power7 SMT (Simultaneous MultiThreading) to favor workload consolidation on fewer cores. That can improve the ratio of workload throughput to processor utilization. The new option can be useful when consolidating many AIX images on one shared processor pool. The new options are available in the AIX schedo command and only supported on Power7 and Power7+.
- **Shared Dedicated Capacity:** This new configuration option for dedicated processor partitions enables the administrator to donate excess processor cycles to a Shared Processor Pool without affecting the workload running in the dedicated processor partition.
- **Multiple Shared Processor Pools:** Systems based on POWER6 or POWER7 processors support multiple separate Shared Processor Pools. This feature can be used for additional control of processor resource allocations and potentially can reduce the license charges for applications running in a micropartition.
- **Active Memory™ Sharing:** AIX 6 fully supports the Active Memory Sharing feature of PowerVM. Active Memory Sharing allows the PowerVM hypervisor to automatically reallocate physical system memory between Logical Partitions (LPARs) to provide more flexibility for consolidation of workloads.
- **Active Memory Expansion:** AIX 6 at Technology Level 4 or later supports the Active Memory Expansion feature of POWER7 processor-based systems to provide for more effective memory for some workloads.

Open source flexibility

AIX 6 offers a wide range of system interoperability features and open source tools to enable Linux applications to be recompiled and run in a native AIX 6 environment. AIX affinity with Linux can promote faster and less costly deployment of multiplatform, integrated solutions. Many solutions developed for Linux will run on AIX 6 with a simple recompilation of the source code. IBM provides the AIX Toolbox for Linux Applications, which is a collection of open source and GNU software commonly found with Linux distributions. Because the applications run on AIX, businesses can combine the flexibility of Linux with the advanced features of AIX 6, including advanced workload management, sophisticated systems management tools, scalability and security.

AIX Expansion Pack

The AIX Expansion Pack extends the base operating system by providing an integrated directory server, encryption support, an HTTP server to serve online publication pages and support web-based System Manager and a number of other useful applications.

Service and support to help keep businesses running

AIX 6 provides a platform that lets you get the most out of today's applications while positioning your business for the future. And like all Power Systems products, AIX 6 is backed by IBM's worldwide service and support.

AIX Version 6.1 new features

Feature	Benefits
Virtualization	
AIX Workload Partitions	Reduced administration, improved system efficiency
Live Application Mobility	Increased application availability, enhanced workload manageability and energy savings
AIX Live Partition Mobility	Increased application availability, enhanced workload manageability and energy savings*,†
Multiple Shared Processor Pools	Greater resource management flexibility and reduced application software expense*,†
Shared Dedicated Processors	Improved server utilization*,†
Security	
Role Based Access Control	Improved security, decreased administration costs
Encrypting Filesystem	Improved security
Trusted AIX	Highest level of security for critical government and business workloads
AIX Security Expert	Improved security, decreased administration costs by enabling federated management of security across multiple AIX systems
Secure by Default	Improved security on initial installations of AIX 6
Trusted Execution	Improved security
Filesystem Permissions Tool	Improved security
Near-continuous Availability	
Concurrent AIX Updates	Greater system availability, improved security by enabling critical security patches to be installed without causing an outage
Storage Keys	Improved AIX availability* and improved application availability†
Dynamic Tracing	Easier resolution to application execution and performance problems
Enhanced First Failure Data Capture	Increased AIX reliability and quicker problem resolution
Nonintrusive Service Aids	Increased AIX reliability and quicker problem resolution
Functional Recovery Routines	Increased AIX and application reliability and availability

Feature	Benefits
Manageability	
AIX Workload Partitions	Reduced administrative expense by reducing the number of AIX operating systems to maintain. Greater flexibility to deploy and manage workloads
Live Application Mobility	Improved flexibility to improve application availability and performance and to reduce energy costs
PowerVM Workload Partitions Manager	Reduced management costs by providing federated management of workload partitions across the enterprise
AIX Live Partition Mobility	Improved flexibility to improve application availability and performance and to reduce energy costs*,†
IBM System Director Console for AIX	Reduced administrative costs and improved administrative effectiveness by enabling web-based administration across multiple AIX instances
Automatic Variable Page Size	Improved performance with reduced administrative effort
AIX Runtime Expert	Simplifies providing consistent configuration of multiple AIX systems.
IBM Systems Director agent included in base AIX installation	Enables AIX systems for immediate management by IBM Systems Director
Supported versions of openssh and openssl included on base AIX installation media	Simplified installation of the commonly used open source tools

For more information

For more information on AIX 6 releases and upgrade benefits, contact your IBM representative or IBM Business Partner or visit the following websites:

- **ibm.com**/aix
- **ibm.com**/systems/power

[1] More information on the binary compatibility of AIX 6 can be found at **ibm.com**/systems/p/os/aix/compatibility/.

* Supported only on Power Systems servers with POWER6 or POWER7 processor technology

† Also supported by AIX 5.3

© Copyright IBM Corporation 2013

IBM Corporation
Integrated Marketing Communications
Systems and Technology Group
Route 100
Somers, NY 10589

Produced in the United States of America
March 2013

Not all offerings are available in every country in which IBM operates.

All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

IBM, the IBM logo, ibm.com, AIX, POWER, POWER6, POWER7, POWER7+, System p, System i, System p5, System i5, eServer, pSeries, IntelliStation, RS/6000, PowerSC, Power Architecture, BladeCenter, Tivoli, PowerVM, z/OS, Workload Partitions Manager, Active Memory, AIX 5L, and Power Systems are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries or both. A full list of U.S. trademarks owned by IBM may be found at: **ibm.com**/legal/copytrade.shtml

Linux is a trademark of Linus Torvalds in the United States, other countries or both.

UNIX is a registered trademark of The Open Group in the United States, other countries or both.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Other company, product, and service names may be trademarks or service marks of others.

IBM hardware products are manufactured from new parts, or new and used parts. Regardless, our warranty terms apply.

Photographs show engineering and design models. Changes may be incorporated in production models.

Copying or downloading the images contained in this document is expressly prohibited without the written consent of IBM.

Information concerning non-IBM products was obtained from the suppliers of these products. Questions on the capabilities of the non-IBM products should be addressed with the suppliers.

All performance estimates are provided "AS IS" and no warranties or guarantees are expressed or implied by IBM. Buyers should consult other sources of information, including system benchmarks, to evaluate the performance of a system they are considering buying.

Please Recycle

POD03007-USEN-04