



# AIX 6 Preview and Open Beta

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## Overview

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AIX® operating system is an open standards-based UNIX® operating system that provides the enterprise-class IT infrastructure for thousands of clients around the world. IBM plans to make available a new release of AIX, AIX 6, in fourth quarter 2007. This new AIX release will include significant new capabilities for virtualization, security, continuous availability features, and manageability. AIX Version 6.1 is planned to be the first generally available version of AIX 6. IBM also plans to make available a new program product, the IBM Workload Partitions Manager for AIX, in the same time period.

### Applications from earlier AIX Version 5 Releases

Applications created on previous versions of AIX 5L™ can run on AIX 6 without recompilation as long as those programs do not use nonportable programming techniques.

Additional information on binary compatibility can be found at

<http://www.ibm.com/servers/aix/os/compatibility/>

IBM intends to make a pre-release version of AIX 6 available in an Open Beta that is planned to start in third quarter 2007. This Open Beta will allow clients to download, install, and run an early version of AIX 6 on suitable IBM systems in a nonproduction, nonsupported mode. This Open Beta is intended to provide clients with an opportunity to gain early experience with AIX 6. Not all capabilities of AIX 6 will be available in the Open Beta.

### Planned availability

- **Open Beta:** Third quarter 2007
- **AIX 6 Preview:** Fourth quarter 2007

For more information on the AIX 6 Preview and Open Beta, visit

<http://www.ibm.com/aix>

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## Description

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IBM intends to make the next release of AIX 6 generally available in fourth quarter 2007. IBM also intends to make a pre-release version of AIX 6 available in an Open Beta program in third quarter 2007. Commercially available versions may not have all the features included in a pre-release version. The focus of this announcement is to preview some of the capabilities of AIX 6 to provide our clients with the information they need to plan for the future.

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

AIX 6 is planned to include significant new capabilities for virtualization including:

**Workload Partition:** Workload Partition (WPAR) is a software-base virtualization capability of AIX 6 that will provide a new capability to reduce the number of AIX operating system images that need to be maintained when consolidating multiple workloads on a single server. WPARs will provide a way for clients to run multiple applications inside the same instance of an AIX operating system while providing security and administrative isolation between applications. WPARs complement logical partitions and can be used in conjunction with logical partitions if desired.

WPAR can improve administrative efficiency by reducing the number of AIX operating system instances that must be maintained and can increase the overall utilization of systems by consolidating multiple workloads on a single system and is designed to improve cost of ownership.

**Application Mobility:** Application Mobility is a new capability that allows a client to relocate a running WPAR from one system to another, without requiring the workload running in the WPAR to be restarted. Application Mobility is intended for use within a data center and requires the use of the new Licensed Program Product, the IBM AIX Workload Partitions Manager.

AIX 6 will also include significant new capabilities to enhance the already strong security available with AIX. Some of these capabilities include:

- **Role Based Access Control:** Role Based Access Control (RBAC) is designed to improve security and manageability by allowing administrators to delegate system administrative duties to nonroot users. RBAC in AIX has been enhanced to provide very fine granular authorizations that by name identify the privileged operation which they control. These authorizations can be used to create the required roles necessary and assign those roles to the users required to manage the system. Such nonroot users will be able to assume the role and perform the allowed privileged operations.
- **Trusted AIX:** Trusted AIX extends the security capabilities of the AIX operating system by supplying integrated multi-level security. 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.
- **Encrypting filesystem:** The IBM Journaled Filesystem Extended (JFS2) provides for even greater data security with the addition of a new capability to encrypt the data in a filesystem. Clients can select from a number of different encryption algorithms. The encrypted data can be backed up in encrypted format, reducing the risk of data being compromised if backup media is lost or stolen. The JFS2 encrypting filesystem can also prevent the compromise of data even to root-level users.
- **Enhancements to the AIX Security Expert:** The AIX Security Expert was introduced with Technology Level 5 update to the AIX V5.3 operating system, and provides clients with the capability to manage more than 300 system security settings from a single interface and the ability to export and import those security settings between systems. AIX 6 includes an enhancement to the Security Expert to store security templates in a Lightweight Directory Protocol (LDAP) directory for use across a client's enterprise.
- **Trusted Execution:** The Trusted Execution (TE) feature provides for an advanced mechanism for checking and maintaining system integrity. A signature (SHA256/RSA) database for the important system files is created automatically as part of regular AIX install. The TE tool can be used to check the integrity of the system against the database. Also administrators 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, administrators can lock the signature database or the files in the database from being modified by any one in the system, including root.

- **Secure by Default:** The AIX 6 installation process will offer a new option, Secure by Default, that installs only the minimal number of services to provide the maximum amount of security. The Secure by Default option works particularly well when used in conjunction with the AIX Security Expert to only enable the system services required for the system's intended purpose.
- **Continuous availability:** Improved reliability, availability, and serviceability have become the most important requirements for many clients, particularly clients that have consolidated multiple workloads onto a single system. Over the past several years, IBM has included many continuous availability features in the AIX operating system. AIX 6 includes many mainframe-inspired continuous availability features, including:
  - **Concurrent AIX updates:** Concurrent AIX updates provides a new capability to deliver some kernel updates as Interim Fixes that will not require a system reboot to be put into effect. This new capability will provide IBM with a tool to reduce the number of unplanned outages required to maintain a secure, reliable system.
  - **Kernel Storage Keys:** Kernel exploitation of the POWER6™ processor storage key feature brings a mainframe-inspired reliability capability to the UNIX market for the first time. Storage keys can reduce the number of intermittent outages associated with undetected memory overlays inside the kernel. Applications can also use the POWER6 storage key feature to increase the reliability of large, complex applications running under the AIX V5.3 or AIX V6.1 operating systems.
  - **Dynamic tracing with probevue:** AIX 6 will provide a new dynamic tracing capability that can simplify debugging complex system or application code without requiring code changes and recompilation. This dynamic tracing facility will be introduced via a new tracing command, probevue, that allows a developer or system administrator to dynamically insert trace breakpoints in existing code without having to recompile the code. A developer or system administrator can use probevue to dynamically place probes in existing code, and specify the data to be captured at probe point.
  - **Live dump:** AIX 6 continues to build upon the first failure data capture and nondisruptive service aid features introduced in prior AIX releases. A new live dump feature allows selected subsystems to dump their memory state and traces to the filesystem for subsequent service analysis, without requiring a full system dump and outage.
- **Improving manageability:** AIX 6 includes many new capabilities to improve the manageability of the AIX operating system, including NFSv4 support for the Network Installation Manager (NIM), a new, graphical installation tool and a new graphical systems console, the Systems Director Console for AIX. The Systems Director Console for AIX provides a responsive Web access to common systems management tools such as the Systems Management Interface Tool (SMIT) and offers integration into the IBM Systems Director. The Systems Director Console for AIX is included with AIX 6.
- **Name resolver caching daemon:** The network resolver caching daemon caches requests to resolve a hostname, service, or netgroup to improve the efficiency of subsequent requests for the same information.

## **Business Partner information**

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If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld ID and password are required (use IBM ID).

BP Attachment for Announcement Letter 207-109

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=207-109>

## Trademarks

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UNIX is a registered trademark of the Open Company in the United States and other countries.

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## Publications

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This statement does not apply to AIX® 6 Preview and Open Beta; it applies only to the terms and conditions documentation for the Software Maintenance Agreement (SWMA).

The terms and conditions for the AIX operating system and supporting License Program Products (LPP) SWMA will be part of the Click to Accept in the Install of the AIX operating system. There will be no SWMA hardcopy documents shipping with the AIX operating system and supporting LPPs in the U.S. unless requested by the customer. One set of terms and conditions for SWMA cover all copies of the AIX operating system ordered on the SPO Order. This is a U.S.-only implementation at this time.

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## Technical information

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**Hardware requirements:** IBM systems that run on the POWER4™, PPC970, POWER5™ or POWER6™ processors, including the IBM System p™, IBM System p5™, IBM eServer® p5, and IBM eServer pSeries® server product lines, as well as IBM BladeCenter® JS2x blades and IntelliStation® POWER™ workstations.

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## Ordering information

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**Charge metric:** N/A

This statement does not apply to AIX 6 Preview and Open Beta; it applies only to the AIX Upgrade Feature.

AIX is adding an upgrade feature to make it easier to track and identify upgrades. This feature has no deliverables; the feature is only an identifier.

Description	Program number	Upgrade feature number
AIX Upgrade Feature	5692- A5L	1431

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### Software Maintenance

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This statement does not apply to AIX 6 Preview and Open Beta; it applies only to the VIOS 3-year SWMA offering. VIOS 3-year SWMA features that were previously announced to be withdrawn in [906-160](#), dated July 25, 2006, will not be withdrawn.

Program name	Program number	Feature number
SWMA 3-year options	5773- VI 0	0894
		0895
		0821
		0822
		0571
		0572
		0573
		0574
5773- VI 3		0781
		0782
		0862
		0863

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### HACMP™ for AIX V5.3 Marketing Extension

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This statement does not apply to AIX 6 Preview and Open Beta; it applies only to HACMP for AIX, V5.3.

IBM is extending the marketing of High Availability Cluster Multiprocessing (HACMP) for AIX,

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## IBM Electronic Services

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Electronic Service Agent™ tool and the IBM Electronic Services Web portal comprise the IBM Electronic Services solution — dedicated to providing fast, exceptional support to IBM Systems customers. 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 5L™ V5.3 TL6, AIX 6.1, and later, Electronic Service Agent V6 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 Services 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 V6 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 V6.0, refer to

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

The Electronic Services Web portal is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. This Web portal enables you to gain easier access to IBM resources for assistance in resolving technical problems. The newly improved 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

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**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 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 Services 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 the IBM Electronic Service Agent tool. 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 Service Agent information that has been collected from your system, customers are able to see search results that apply specifically to their systems.

For more information on how to utilize the power of IBM Electronic Services, contact your IBM Systems Services Representative, or visit

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

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