Overview
Most companies today face a growing problem. The past 40 years of IT evolution have left them with an enterprise-computing infrastructure that is heterogeneous, widely distributed, and complex. Business logic and application data typically are scattered throughout the organization across multiple software assets. Furthermore, companies can face constant pressure to create new applications that integrate business logic and application data within the organization and with suppliers, partners, and customers in order to cut costs, build customer loyalties, and gain a competitive advantage. However, this integration remains complex, expensive, and risky.

What can you do to address these challenges?

You can leverage the power of open standards and the flexibility of a service-oriented architecture by using WebSphere® Studio Application Developer (AD) Integration Edition V5.1 in conjunction with WebSphere Business Integration Server (WBISF) V5.1 to build and deploy composite applications that make it easy to reuse your existing infrastructure and that are designed to adapt quickly to change.

In addition to a full Java™ 2 Platform, Enterprise Edition (J2EE) development environment, WebSphere Studio AD Integration Edition V5.1 provides easy-to-use tools for creating reusable services out of a variety of back-end systems and for choreographing the interactions between those services using Business Process Execution Language for Web Services (BPEL).

New in WebSphere Studio AD Integration Edition V5.1
- Business process designer for creating BPEL 1.1 process flows
- Integrated BPEL debugger
- Enhanced performance for install and debug function including support for J9 hot swap
- New visual condition builder to direct the execution of BPEL processes
- Automated migration of process flows created with WebSphere Studio AD Integration Edition V5.0 to BPEL
- Unit test environment for WebSphere Business Integration Server Foundation V5.1
- Full support for all the features included in WebSphere Studio AD V5.1.1 including support for Workbench V2.1.2, support for building Web Services Interoperability (WS-I) compliant Web services, and support for Java development kit (JDK) 1.4.1

Key prerequisites
For details, refer to the Hardware and software requirements section.

Planned availability dates
- April 6, 2004, English electronic software delivery
- May 5, 2004, National languages electronic software delivery
- May 28, 2004, media and documentation

At a glance

WebSphere Studio Application Developer Integration Edition V5.1, optimized for developing applications that deploy to WebSphere Business Integration Server Foundation (WBISF) V5.1, delivers a next-generation composite application development environment for building service-oriented applications that extend and integrate your existing IT assets.

- Helps improve IT responsiveness by leveraging a service-oriented architecture to build modular applications that are designed to adapt quickly to change
- Helps extend and integrate your existing infrastructure by creating reusable services out of a variety of back-end systems using a broad portfolio of adapters and Web services interfaces
- Helps maximize developer productivity by quickly constructing new process-based applications using drag-and-drop development tools to visually coordinate the interactions between your software assets
- Helps anticipate change by taking advantage of business rules to embed adaptable business logic into your applications and business processes
- Helps protect your infrastructure investments by building on the open, industry-leading, industry-tested, industry-supported WebSphere platform to minimize development and administration costs and maximize choice of solutions today and tomorrow

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: http://www.ibm.com.
Description

WebSphere Studio AD Integration Edition V5.1, optimized for developing applications that deploy to WBISF V5.1, delivers an application development environment for building service-oriented applications that extend and integrate your existing IT assets.

As a result of rebranding, a product name has changed. WBISF V5.1 is the follow-on product to WebSphere Application Server Enterprise V5.0.

Together, WebSphere Studio AD Integration Edition V5.1 and WBISF V5.1 provide:

BPEL support

BPEL defines a model and a grammar for describing the behavior of a business process based on interactions between the process and its partners. Support for BPEL includes:

- Application assembly, deployment, and runtime support for BPEL-based business processes
- Intuitive drag-and-drop tools to visually define the sequence and flow of BPEL business processes
- A visual business process debugger to step through and debug BPEL business processes
- Compensation support to provide transaction "rollback"-like support for loosely coupled business processes that cannot be undone automatically by the application server
- A standards-based (XML Path Language (XPath) / Extensible Stylesheet Transformation (XSLT)) transformation wizard to map data between nodes in a process
- Integrated fault handling to provide an easy and integrated means of performing in-flow exception handling
- Support for including Java snippets and artifacts as part of a business process

Human workflow support

Human workflow support expands the reach of BPEL to include activities requiring human interaction as steps in an automated business process. Business processes involving human interaction are interruptible and persistent (a person may take a long time to complete the task) and resume when the person completes the task. Human workflow support includes:

- Staff activity nodes to represent a step in a business process that is performed manually
- Ability to assign people (for example, direct reports) to specific instances of a process via staff queries that are resolved at runtime using an existing enterprise directory
- Graphical browser-based interface for querying, claiming, working with, completing, and transferring work items to another user
- Advanced work item management support for managing the creation, transfer, and deletion of work items
- Dynamic setting of duration and calendar attributes for staff activities
- Dynamic setting of staff assignment via custom attributes

Back-end system connectivity

WebSphere Studio AD Integration Edition V5.1 provides integrated, open standards-based support for building Web applications and BPEL business processes that integrate with back-end systems including:

- Integrated tool support for using J2EE Connector Architecture (JCA) 1.0 resource adapters to access back-end systems
- Enhanced tool integration for JCA adapters with tool plug-in extensions (available from IBM and IBM Business Partners)
- Support for the entire suite of WebSphere Business Integration Adapters
- Easy-to-use tools for creating services out of JCA resource adapters and including those services as part of a BPEL business process
- Enhanced JCA 1.0 resource adapters included for CICS®, IBM Host On-Demand, and IBM Information Management System (IMS™)
- Sophisticated wizards to manage the low-level data handling requirements for JCA resource adapters
- Wizards to quickly and simply expose CICS or IMS programs as enterprise services including the ability to import definitions from COBOL, C structures, CICS basic mapping support (BMS), and IMS Message Format Service (MFS) definitions

Business rule beans

Business rule beans offer a powerful real-time framework for defining, executing, and managing business rules that encapsulate business policies that vary based on changes in the business environment. For example, a simple business rule might be, "If a customer’s shopping cart is greater than $X, then offer a Y% discount." Business rule support includes:

- Deliver easy-to-use tools for defining, executing, and managing business rules
- Cheat sheet for defining business rules
- Update business rules at runtime using a straightforward user interface without the need to bring the application or server down
- Organize business rules into logical categories using the business rules beans framework
- Define a start and end date for when the rule is in effect
- Use business rules with BPEL4WS processes to automate decisions and increase process flexibility

Programming model extensions

WBISF V5.1 and WebSphere Studio AD Integration Edition V5.1 help accelerate large-scale application development by allowing the user to leverage the latest innovations that build on today’s J2EE standards including extended messaging, dynamic query service, internationalization service, application profiling, asynchronous beans, object pooling, startup beans, scheduler service, activity session service, and last participant support. New programming model extensions include:

- Distributed Map offers an interface to enable J2EE applications and system components to cache and share Java objects by storing a reference to the object in the cache in order to improve performance.
• Container Managed Persistence over Anything extends the existing J2EE Container Managed Persistence (CMP) framework to support any backend system or service that supports create, retrieve, update, and delete (CRUD) methods.

Best-in-class development environment

WebSphere Studio AD Integration Edition V5.1 builds on the WebSphere Studio Application Developer V5.1.1 to provide a best-in-class integrated development environment for building, testing, integrating, and deploying J2EE applications, Web services, and business processes.

For more information on WBISF V5.1, visit

http://www.ibm.com/software/integration/wbisf

For more information on WebSphere Studio AD Integration Edition V5.1, visit

http://www.ibm.com/software/integration/wsadie

Feature and interface improvement replacements

In keeping with the IBM commitment to open standards, the IBM Common Connection Framework (CCF) is replaced with JCA in WBISF V5.1. CCF functions will be delivered in this release for migration purposes. IBM recommends that you put migration plans in place to remove application dependencies, and build all new applications on the new, replacement interfaces.

IBM will continue to support these replaced interfaces until end of service of this release. Afterwards, support will be withdrawn. CCF broke new ground upon release and has significantly influenced the evolution of the now industry-standard JCA. IBM is committed to open standards. Our strategy is to help customers move toward industry standards as they provide the necessary function. IBM recommends that you put plans in place to complete migration of CCF applications to JCA within the next three years.

Support of business processes created with WebSphere Studio AD Integration Edition V5.0 is being deprecated in WBISF V5.1. Business processes created with WebSphere Studio AD Integration Edition V5.0 need to be migrated to a process based on BPEL using the Migrate option provided with WebSphere Studio AD Integration Edition 5.1.

Several Process Choreographer API Interfaces and methods used for business processes created with WebSphere Studio AD Integration Edition V5.0 or earlier are deprecated. A detailed list can be found in the Java Documentation provided with Process Choreographer. The recommended migration action for the deprecated APIs is available on a detailed level in the JavaDoc for the appropriate API.

Additional information on feature and interface replacements can be found in the WebSphere Business Integration Information Center:

http://publib.boulder.ibm.com/infocenter/wbihelp/index.jsp

Section 508 of the U.S. Rehabilitation Act

WebSphere Studio AD Integration Edition is capable, as of May 28, 2004, when used in accordance with IBM’s associated documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it.

Product positioning

Integration is the heart of e-business on demand™. It is about integrating data, applications, processes and people across and beyond your company, giving you the power to leverage existing IT investments while having the flexibility to adapt quickly to changing business conditions.

IBM helps companies to realize the benefits of end-to-end integration through six core capabilities:

- Model business functions and processes
- Transform applications, processes and data
- Integrate islands of applications, processes and information
- Interact with resources anytime, anywhere with any device
- Manage performance against business objectives
- Accelerate the implementation of business processes

Each capability has the following qualities, built on a service-oriented infrastructure, that together make up IBM’s world-class integration portfolio:

- Simple integrated development
- Secure and scalable deployment
- Proven experience
- Standards leadership
- Service Oriented Architecture (SOA) enablement

Together, WBISF (previously WebSphere Application Server Enterprise) and WebSphere Studio AD Integration Edition make up a core part of IBM’s integration capability — delivering a next-generation composite application platform optimized for building service-oriented applications that extend and integrate your existing IT assets. The platform also offers the qualities you would expect from an industry-leading integration platform such as simple integrated development, secure and scalable deployment, proven experience, and standards leadership.

Statement of direction

Additional platform support

IBM plans to make WBISF V5.1 available on z/OS® in the second quarter 2004, and OS/400®, in third quarter 2004.

Support for WebSphere Business Integration Modeler and WebSphere Business Integration Monitor

IBM intends to enable WebSphere Business Integration Modeler and WebSphere Business Integration Monitor to support WebSphere Studio AD Integration Edition V5.1 and WBISF V5.1. WebSphere Business Integration Modeler and WebSphere Business Integration Monitor are planned for availability in the second half 2004.
WebSphere Business Integration Modeler is a state-of-the-art product used to define, model, analyze, simulate, and report business processes extending WBISF with business tooling to visualize process impact for today’s competitive global marketplace. WebSphere Business Integration Monitor is a real-time monitor that utilizes visual dashboards to provide a dynamic view of business processes, for business performance management and improved decision making.

All statements regarding IBM plans, directions, and intent are subject to change or withdrawal without notice.

Trademarks

IMS and e-business on demand are trademarks of International Business Machines Corporation in the United States or other countries or both. WebSphere, CICS, z/OS, and OS/400 are registered trademarks of International Business Machines Corporation in the United States or other countries or both. Java is a trademark of Sun Microsystems, Inc. Other company, product, and service names may be trademarks or service marks of others.
Education support

It is easy to learn about WebSphere® Studio AD Integration Edition and WBISF software. IBM has several educational options available to you. From classroom courses to onsite assistance and Internet-based training, if you are ready to learn—we're ready to teach. See the wide range of offerings available to fit your learning needs at the developerWorks™ WebSphere site.


Refer to the IBM IT Education Services Web site for information on course locations and availability dates.

Call IBM IT Education Services at 800-IBM-TEACH (426-8322) for catalogs, schedules, and enrollments.

Offering information

Product information is available through the Offering Information Web site at

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

and through the Passport Advantage® Web site at

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

Publications

No publications are shipped with this product.

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 U.S.) 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.

The IBM Publications Notification System (PNS):

http://service5.boulder.ibm.com/pnsrege.nsf/messages/welcome

The PNS enables subscribers to set up profiles of interest by order number/product number. PNS subscribers automatically receive notifications by e-mail of all new publications defined in their profiles. These may then be ordered downloaded via the Publications Center. The site is available in English and Canadian French.

Technical information

Hardware and software requirements: Refer to the following Web site for detailed hardware and software requirements information

http://www.ibm.com/software/integration/wsadie/requirements/

Planning information

Software Maintenance, previously referred to as Subscription and Technical Support, is now included in the Passport Advantage Agreement. Installation and technical support for the products announced in this letter is provided by the Software Maintenance offering of the IBM International Passport Advantage Agreement. This fee service enhances customer productivity by providing voice and/or electronic access into the IBM support organizations.

Packaging: The WebSphere Studio AD Integration Edition for Linux and Windows™, V5.1 media package contains the following items packaged as a single unit:

Media:
- WebSphere Studio AD Integration Edition for Linux and Windows, V5.1 CDs
- DB2® Enterprise Server Edition for Linux and Windows, V8.1 Fix Pack 4 CDs
- WebSphere Application Server for Developers for Linux and Windows, V5.1 CDs
- WBISF for Developers for Linux and Windows, V5.1 CDs

Security, auditability, and control

WebSphere Studio AD Integration Edition uses the security and auditability features of the respective operating systems.

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

Ordering information

Product information

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<th>Licensed function title</th>
<th>Product group</th>
<th>Product category</th>
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<tr>
<td>WebSphere Studio AD Integration Edition</td>
<td>App Integration</td>
<td>WebSphere</td>
</tr>
<tr>
<td></td>
<td>Middleware</td>
<td>Other</td>
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WebSphere Studio AD Integration Edition for Linux and Windows, V5.1 is a stand-alone product with one charge unit—user. It is available in units of one.

**Passport Advantage program licenses**

**WebSphere Studio AD Integration Edition**

<table>
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<th>Part description</th>
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**Product trade-ups:** If you currently use a product comparable to WebSphere Studio AD Integration Edition, you can migrate to WebSphere today and save.

Valid license holders of the competitive products listed below are eligible for trade-up on a one-for-one basis to WebSphere Studio AD Integration Edition V5.1 by providing a copy of purchase invoice/bill of sale or the original Proof of Entitlement (PoE). Each tradeup license will be discounted 25% off the price you would normally pay based on your Passport Advantage Agreement terms and discount level. Be aware that at your Passport Advantage renewal date, charges for WebSphere Studio AD Integration Edition maintenance renewal will be calculated at your regular entitled Passport Advantage discount level.

**Competitive trade-ups for part number: D513WLL**

- BEA WebLogic Workshop
- JBuilder Enterprise
- Borland Optimizet Enterprise Suite
- Borland JBuilder WebLogic Edition
- Borland Enterprise Studio for Java™
- Microsoft® Visual Studio .NET Enterprise Developer
- Microsoft Visual Studio .NET Enterprise Architect
- Oracle Internet Developer Suite
- Oracle Jdeveloper
- Sun ONE Studio Enterprise Edition for Java

Valid license holders of the IBM products listed below are eligible for trade-up on a one-for-one basis to WebSphere Studio AD Integration Edition V5.1 by providing a copy of purchase invoice/bill of sale or the original Proof of Entitlement (PoE). Each tradeup license will be discounted 50% off the price you would normally pay based on your Passport Advantage Agreement terms and discount level. Be aware that at your Passport Advantage renewal date, charges for WebSphere Studio AD Integration Edition maintenance renewal will be calculated at your regular entitled Passport Advantage discount level.

**IBM tradeups for part number: D513TLL**

- WebSphere Studio Application Developer

**Passport Advantage supply**

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**Passport Advantage customer: Media pack entitlement details**

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

**WebSphere Studio AD Integration Edition V5.1.0**

**Entitled maintenance offerings**

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<td>BA0CMML</td>
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</table>

**Terms and conditions**

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

**Agreement:** IBM International Program License Agreement. PoEs are required for all authorized use.

Part number products only, offered outside of Passport Advantage, where applicable, are license only and do not include Software Maintenance.

**License information form numbers**

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<td>L-TTSU-5VMQAV</td>
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**Limited warranty:** Yes

**Money-back guarantee:** If for any reason you are dissatisfied with the program, return it within 30 days from the invoice date, to the party (either IBM or its reseller) from whom you acquired it, for a refund. This applies only to your first acquisition of the program.
Copy and use on home/portable computer: Yes

Volume orders (IVO): No

Passport Advantage applies: Yes, and through the Passport Advantage Web site at
http://www.ibm.com/software/passportadvantage

Usage restriction: Yes

For Usage Requirements, please see the License which accompanies the product. Specifically, the Program-unique Terms (PUTs) part of the license records the restrictions on the use of the product and/or the software associated with the product.

Software Maintenance applies: Yes

Software Maintenance, previously referred to as Subscription and Technical Support, is now included in the Passport Advantage Agreement. Installation and technical support for the product(s) announced in this letter is provided by the Software Maintenance offering of the IBM International Passport Advantage Agreement. This fee service enhances customer productivity by providing voice and/or electronic access into the IBM support organizations.

IBM includes one year of Software Maintenance with the initial license acquisition of each program acquired. The initial period of Software Maintenance can be extended by the purchase of a renewal option that is available.

While your Software Maintenance 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, every day of the year. For additional details, consult your IBM Software Support Guide at
http://techsupport.services.ibm.com/guides/handbook.html

Software Maintenance 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 this agreement.

For more information, about the Passport Advantage Agreement, refer to the IBM International Passport Advantage Agreement Software Announcement 201-202, dated July 10, 2001. or visit the Passport Advantage Web site at
http://www.ibm.com/software/passportadvantage

IBM operational support services — support line: No

iSeries™ software subscription applies: No

Educational allowance available: Not applicable

Prices

Passport Advantage

For Passport Advantage information and charges, contact your IBM Representative or authorized IBM Business Partner. For additional information about the Passport Advantage offering, visit the following Web site
http://www.ibm.com/software/passportadvantage

To order, contact the Americas Call Centers, your local IBM representative, or your IBM Business Partner.

To identify your local IBM Business Partner or IBM representative, call 800-IBM-4YOU (426-4968).

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