IBM WebSphere Studio Enterprise Developer V5.1.1 brings J2EE, Web services, rapid development, and teaming to diverse Java, COBOL, and PL/I application environments

Overview
IBM WebSphere® Studio Enterprise Developer V5.1.1 brings the power of Java™ 2 Platform, Enterprise Edition (J2EE), rapid application development, and support to diverse enterprise application development teams. With comprehensive development tools to help create, deploy, and maintain enterprise Web applications, developers from different technical backgrounds can easily participate in e-business projects together. As traditional programmers collaborate in the development process, their exposure to new technologies increases while they continue to leverage their existing skills.

WebSphere Studio Enterprise Developer is IBM’s premier enterprise application development environment for building and maintaining J2EE and Web services applications in addition to developing and extending CICS®, IMS™, and Batch COBOL and PL/I mixed workload processing.

New in V5.1.1
- Support for Enterprise COBOL for z/OS® V3.3 and Enterprise PL/I for z/OS V3.3
- Upgraded local COBOL and PL/I compiler syntax
- z/OS-based Web Service Generation, including High Speed COBOL parsing with support for XML Schema Definition (XSD) mapping and CICS Simple Object Access Protocol (SOAP) support
- PL/I language enhancements, including code assist, documentation helpers, and enhanced outline view
- Extended z/OS Batch Queue Management, enabling selection and output viewing of individual steps
- Integrated Unified Model Language (UML) Visual Editing for Java to create, edit, and print UML class diagrams
- Support for building Web Services Interoperability (WS-I) compliant Web services using the Web Services Description Language (WSDL) Editor and Web Services Explorer
- Struts 1.1 support for simplified application development on the latest Struts framework
- Improved performance for builds, test server startup, EJB deployment, and UI intensive development
- Developer access to IBM Host Access Transformation Services, supporting rapid Web enablement of traditional z/OS-based applications

Key prerequisites
Refer to the Software requirements and Hardware requirements sections.

Planned availability dates
- April 23, 2004: Electronic software delivery
- May 7, 2004: Media and documentation

At a glance
V5.1.1 helps reduce the skills needed to develop component-based Web applications:
- Helps you create dynamic Web applications including support for J2EE, XML, and Web services technologies
- Lets you rapidly create well-structured e-business systems that integrate WebSphere software and traditional transactional environments in modern service oriented architectures, including CICS and IMS systems
- Promotes the reuse and transformation of existing applications to help reduce costs and shorten the development cycle
- Leverages visual construction to an open Struts-based model-view-controller (MVC) framework to help make application development intuitive and easy
- Contains development support for Java, COBOL, and PL/I languages improving productivity to develop z/OS system-based applications while transitioning to e-business architectures
- Provides Java Connector Architecture (JCA) runtime components and automates creation of application components utilizing JCA

For ordering, contact:
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Reference: SE001

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WebSphere Studio Enterprise Developer V5.1.1 consists of a common workbench and integrated set of tools that support end-to-end, model-based application development, runtime-testing, and rapid deployment of e-business, traditional, and mixed workload applications.

WebSphere Studio Enterprise Developer supports a broad range of developers with added flexibility and the ability to integrate with existing applications.

- Create Web applications by melding diverse employee skill sets and extending existing systems.
- Develop and integrate CICS and IMS transactional applications and Batch applications.
- Take advantage of proven run-time environments, leveraging service oriented architectures and Web services, while helping reduce your deployment risks.

WebSphere Studio Enterprise Developer offers an integrated development environment (IDE) with advanced, easy-to-use tools and features to help diverse developers rapidly design, code, and deploy complex applications.

WebSphere Studio Enterprise Developer is built on Eclipse-based technology, so that developers can share a common view of applications and resources stored in a common repository. Employing the common services of an integrated development infrastructure helps facilitate better management and communications while reducing the requirements for manual integration. Eclipse technology also enables integration to complementary development tools that interoperate with other WebSphere Studio and Eclipse-based products. WebSphere Studio Enterprise Developer extends the base Eclipse platform to provide end-to-end support for J2EE and Web services development, and is optimized for WebSphere Application Server, CICS, IMS, and DB2® deployment.

Plug-ins are available to seamlessly integrate Enterprise Developer with IBM and third-party tools, and to support non-IBM application servers.

WebSphere Studio Enterprise Developer includes a Web Diagram Editor that maps applications to help developers quickly recognize the flow, structure, and components of Web applications. The Web Diagram Editor provides a Struts-based automated design and construction environment that helps enable quick development of Web application architecture and the underlying code that implements that architecture. Java Server Pages (JSPs) implementing the visual parts of an application, beans implementing data access, and usage and actions implementing the business process in an application, including their relationships, are painted on a palette with available wizards that enable the entry of required information and properties.

WebSphere Studio Enterprise Developer also contains tools for building the underlying business processing and infrastructure for Web applications. These tools support the popular, open-source Struts runtime, and include a visual construction environment that allows the developer to quickly link views with business logic implemented in a number of different technologies, such as Java, Enterprise Java Beans (EJBs), Web Services, COBOL, and PL/I. This capability allows many different skill sets to contribute to the construction of sophisticated Web, traditional, and mixed workload applications.

WebSphere Studio Enterprise Developer combines visual construction of complex Web systems with the open Struts-based model-view-controller (MVC) component architecture. It embraces this architecture, which facilitates rapid change and component reuse with a model-based development paradigm, to provide the rapid construction of well structured e-business systems delivered to WebSphere. In addition, it integrates development tools for traditional transactional environments (CICS and IMS) and languages (COBOL and PL/I).

Simplifies the development process: Creating high-performance, content-rich Web applications requires the strategic investment and careful management of resources and skills. To help shorten the development cycle and leverage resources, enterprise developers rely heavily on component technologies. Using components, sometimes called services, allows teams to reuse proven and reliable capabilities, instead of duplicating their development efforts.

WebSphere Studio Enterprise Developer employs MVC architecture to create components and simplify the development process by allowing key aspects of Web applications to be isolated and maintained independently. The MVC pattern contains three main elements:

- Model — Houses the core of the application functions
- View — Gathers and submits information of user-interface elements
- Controller — Manages the execution flow of the application

Widely used by J2EE experts, this architecture allows developers to define, reuse, and debug application flows, actions, and patterns. WebSphere Studio Enterprise Developer supports HTML and JSP components incorporated in the view, servlet processing for the controller, and EJB, COBOL, PL/I component processing in the supported WebSphere and z/OS environments. You can quickly change and integrate environments as your business needs change. Developers with varied skill sets can easily maintain Web applications and help save future development costs.

To help support the Struts framework, WebSphere Studio Enterprise Developer includes a Web Diagram Editor that maps out applications to facilitate a faster understanding of the flow, structure, and components of Struts-based Web applications. Developers have quick access to resource-appropriate editors and wizards, and can separate team responsibilities to help improve productivity and focus.

Extends WebSphere Studio Workbench technology: WebSphere Studio Enterprise Developer is built on WebSphere Studio Workbench technology, so that your developers share a common view of applications and resources stored in a common repository. This collaboration can facilitate management and communications, reduce the requirements for manual integration, and ultimately shorten the development process. A universal tool platform, WebSphere Studio Workbench enables you to integrate complementary development tools that can interoperate with other products built on WebSphere Studio Workbench.

Enhances development capability with leading-edge tools: You have existing applications that you want to keep and important data residing in legacy systems. Enterprise application programmers need advanced tools to build Web applications with business logic that preserve investments and reduce development time. With WebSphere Studio Enterprise Developer, you can:

- Define JSPs and servlets, and map entity beans to databases
• Generate EJBs and access transaction processing systems to better leverage your investments while you help lower the cost of retooling, integrating, and updating existing applications.

WebSphere Studio Enterprise Developer offers a fully supported EJB, V2.0 development environment to create and test applications for rapid deployment to your application servers. With a unit test environment, WebSphere Studio Enterprise Developer integrates tightly with the WebSphere software family and enables easy deployment to WebSphere Application Server.

A robust query engine supports deployed code by creating Structured Query Language (SQL) strings to be generated into persistor classes. WebSphere Studio Enterprise Developer also provides tools to create, edit, and validate EAR files and editors to format deployment descriptors.

**Test and debug during runtime on local or remote servers:** Testing Web applications is just as complex and crucial as building them. With the WebSphere Studio Enterprise Developer unit test environment, you can configure local or remote servers to perform cross-platform interactive testing and debugging live in WebSphere Application Server, CICS, IMS, and DB2 transactional environments, and z/OS batch environments. The testing and debugging process begins early in application development, with breakpoint and monitor-testing capability available in the workstation-based development environment. This capability ensures that each aspect of the flow and the associated connections perform as required.

WebSphere Studio Enterprise Developer includes a validation framework to identify errors on the fly — so programmers can help save time and money by immediately selecting and correcting errors. Troubleshooting options include traditional debugging in mixed-workload environments, distributed code profiling, and unit testing in Java/J2EE environments. It enables you to edit, test, check syntax, and compile locally. Then recompile the source, build a load module, and test and debug on a remote z/OS system.

**Additional information**

• Support for BEA WebLogic Server V6.1 and V7.0.
• Structured Query Language Java (SQLJ) support for rapidly creating and debugging applications using SQLJ.
• Web Site Designer visually creates, imports, and manages complete Web sites.
• Built on Eclipse 2.1 with improved Java Editor/Debugger.
• Simplified installation and performance improvements.
• New version of Rational® ClearCase® LT (CCLT) with improved integration and performance.
• Hot Method Replace for Debugger enables code changes without restarting unit test server.
• Project builds and syntax checks are performed using JCL procs allowing greater integration into enterprises.
• z/OS Project can now include and operate on sequential files.
• Enhanced editor (LPEX) support for ISPF-like editor characteristics.
• Editor (LPEX) performance enhancements.

• Context sensitive help is available for both COBOL and PL/I from within the editor (LPEX).
• Enhanced launch/debug configuration to allow environment variables to be associated with a locally launched application.
• Debugger enhancements.

**Product specifics**

**J2EE development:** Enterprise Developer provides the following leading-edge J2EE development support:

• Support for J2EE 1.3 specifications — EJB 2.0, servlet 2.3, JSP 1.2
• Generates code for both J2EE 1.2 and 1.3 specifications
• Full EJB 2.0 support includes EJB Query Language, CMP 2.0, and Message-driven beans
• Tools for code import/export, creation, editing, and generation
• Support for standard deployment descriptors as well as extensions and bindings specific to WebSphere Application Server
• EJB-to-RDB mapping that provides the model, run-time environment, and interface for editing the mapping between EJB fields and relational database tables, and views with top-down, meet-in-the-middle, and bottom-up capability
• New multiple-mapping support
• Editors for deployment descriptors (ejb-jar.xml and application.xml)
• Web archive/Enterprise archive (WAR/EAR) deployment support
• Updated EJB test client
• Enhanced J2EE unit test environment, including support for both WebSphere Application Server V4 and V5

**Web Diagram Editor:** Provides a visual component construction environment based on Struts, an open source implementation of the MVC component architecture, that:

• Helps construct MVC-based Web applications with a visual assembly tool
• Provides quick access to resource-appropriate editors and wizards
• Separates team responsibilities for greater productivity and focus

**z/OS development:** An interactive, workstation-based environment that:

• Provides quick access to z/OS (formerly OS/390®) datasets
• Creates COBOL, PL/I, or Assembler code
• Creates IBM CICS system-based code, IBM IMS, and SQL statements

**COBOL and PL/I support:**

• Generates code to IBM Enterprise COBOL for z/OS and IBM Enterprise PL/I for z/OS Compiler specifications
• Support for z/OS system perspective enables access to code without download or copy on workstation
• Support for z/OS local and remote development perspective enables workstation-based development
with project synchronization and management to z/OS-based file structures
- Access to CICS, COBOL, and PL/I code assist
- Color coded editing of COBOL, PL/I, and Assembler languages
- Local and remote syntax check
- Remote compile generation, build, and deployment support
- DB2 COBOL and PL/I stored procedure build and debug support

Java support: The Java perspective has a number of views, editors, wizards, builders, and code merging refactoring tools including:
- Visual Editor for Java for developing GUI components (Swing or AWT) with two-way synchronization between source and GUI. Event support is added in V5.1.1.
- New JavaDoc generation.
- Updated code assist and refactoring tools.
- Shipped with Java Development Kit (JDK) 1.3.
- Pluggable run-time support for JDK switching and targeting multiple run-time environments from IBM and other vendors.
- Automatic incremental compilation.
- Dynamic debugging.
- Common debugger for both local and remote debugging.
- Ability to run code with errors in methods.
- Crash protection and auto-recovery.
- Error reporting and correction.
- Java text editor with full syntax highlighting and complete content assist.
- Intelligent search, compare, and merge tools for Java source files.
- Scrapbook for evaluating code snippets.
- Updated template support.

Basic JCA connector support for CICS ECI, CICS EPI, J2HOD3270, and IMS: WebSphere Studio Enterprise Developer provides tools for creating J2EE application components that can access transactional enterprise environments.

Robust Web services and eXtensible Markup Language (XML) Toolset: WebSphere Studio Enterprise Developer provides wizards and tools to help you rapidly develop Web services in distributed and z/OS environments. Web services are standards-based, e-business applications, accessed through XML, that you can use individually or combine to perform complex transactions with minimal programming. Web services give global businesses a common language with shared definitions to discover each other’s resources, connect dynamically, and enable conducting transactions in real-time with minimal human input.

WebSphere Studio Enterprise Developer includes a comprehensive XML toolset to help you build document type definitions (DTDs), XML schemas, and files as well as integrate relational data with Web services. When integrated with the Enterprise COBOL compiler, WebSphere Studio Enterprise Developer allows you to quickly and easily transform and combine CICS system-based COBOL code into XML-based applications to redeploy as Web services. The Web services you create with WebSphere Studio Enterprise Developer conform to Universal Description Discovery and Integration (UDDI), Simple Object Access Protocol (SOAP), and WSDL standards.

The specialized z/OS Web Services support includes:
- Generating XML Schema Definition (XSD) from COBOL data structures and generating corresponding converters with high speed parsing in the Enterprise COBOL Language Environment® for processing inbound XML and producing outbound XML messages that conform to the generated XSD.
- Visual mapping of XML documents, XML Schemas, and Document Type Declarations to and from COBOL data structures generating the underlying converters with high speed parsing in the Enterprise COBOL language environment.
- Specific options for deployment to various z/OS runtimes including support for the SOAP for CICS feature.

Enterprise Developer facilitates the following Web services development tasks to help you build and deploy Web services-enabled applications for your dynamic e-business across the broadest range of software and hardware platforms used by today’s businesses.

Additional Web services support:
- Discover: Browse the UDDI business registry or a Web Services Inspection Language (WSIL) document to locate existing Web services for integration.
- Create or transform: Create Web services from existing artifacts, such as Java beans, Enterprise Java beans, URLs that take and return data, DB2 XML Extender calls, DB2 stored procedures, and SQL queries.
- Build: Wrap existing artifacts as SOAP and HTTP GET/POST-accessible services and describe them in WSDL.
- Deploy: Deploy the Web service into the WebSphere Application Server or Tomcat test environments.
- Test: Test the Web service as it runs locally or remotely.
- Develop: Generate a sample application to assist you in creating your own Web service client application.
- Publish: Publish your Web services to a private or public UDDI business registry advertising your Web services so that other clients or businesses can access them.
- Apache Axis 1.0 runtime support.
- WSDL Editor: A graphical tool for editing WSDL files and embedded XML schemas.
- Enhanced Web Services Explorer: With support for discovering, browsing, invoking, and publishing WSDL.
- Support for creation of WS-I\(^1\) compliant Web services.\(^1\) Compliant with the June 2003 Board-approved draft of WS-I Base Profile 1.0 Specification.
- Command line tool for creation and consumption of Web services.
- All Web services support is based on open standards such as UDDI V2, SOAP, WSDL, and new support for WSIL.

\(^1\) Compliant with the June 2003 Board-approved draft of WS-I Base Profile 1.0 Specification.
Additional XML support: Enterprise Developer provides a comprehensive visual XML development environment that allows you to:

- Debug and edit Extensible Style Language (XSL) with code assist.
- Create, view, and validate DTDs, XML schemas, XMLs, and XSLs with enhanced XML Schema Graphical Editor.
- Create XML documents from a DTD/XML schema and vice-versa.
- Define mappings between XML documents and generate Extensible Stylesheet Language Transformations (XSLT).
- Create an HTML or XML document by applying an XSL stylesheet against an XML document, using the Xalan processor.
- Debug XSL stylesheets using the XSL Debugger.
- Create and execute your XPath using the XPath wizard.
- Compile XSL stylesheets for fast execution.
- Produce XML-related artifacts from an SQL query.
- Update a relational table from an XML document.
- Define mappings between relational tables and DTD files.
- Generate a document access definition (DAD) script, used by IBM DB2 XML Extender, to either compose XML documents from existing DB2 data or decompose XML documents into DB2 data.
- Generate XML and related artifacts from SQL statements and use these files to implement your query in other applications.

Web development support: The Web development environment includes the following features:

- Web Site Designer to visually create, import, and customize complete Web sites with consistent style and layout using a tree view of the site structure
- Struts 1.1 support to map out and visually construct Web applications using model-view-controller (MVC) design on the latest Struts framework
- Template Application wizard
- Page Designer with support for Visual Custom Tags
- Page Templates, Palette view — Improving usability for HTML/JSP editing using Page Designer
- Convert HTML to eXtensible HTML (XHTML)
- Web project creation, using the J2EE container structure
- JSP and HTML/XHTML file creation, editing, and debugging
- Wireless Markup Language/compact HTML (WML/compact HTML) creation and editing
- XML file creation and editing
- Automatic update of links as resources are moved or renamed
- Servlet creation by means of a wizard
- Generation of Web applications from database queries and beans
- Web graphics tools to create graphics images to be placed to Web pages (not available on Linux)

Unit test environments

- Includes a local copy of WebSphere Application Server V5 for local test of Web applications
- Supports unit test of applications on local or remote Web servers, including WebSphere Application Server V4, WebSphere Application Server V5, WebSphere Application Server — Express V5, and Apache Tomcat

Testing and deployment: Allows cross-platform interactive testing, debugging, and deployment of JSP, servlets, EJB, and HTML files on local and remote Web application servers and also CICS, IMS/DC, and batch debugging of COBOL, PL/I, and Assembler applications.

Debugger: WebSphere Studio Enterprise Developer has a debugger that enables you to detect and diagnose errors in your program running either locally or remotely. The debugger lets you control the execution of your program by setting breakpoints, suspending execution, stepping through your code, and examining the contents of variables. You can debug live server-side code as well as programs running locally on your workstation.

The following is new debugger support in V5.1.1

- Hot Method Replace for debugger allows developers to modify code without having to restart the unit test server
- SQLJ Debug support for rapidly debugging applications using SQLJ
- Client-side JavaScript debug

Relational database support: WebSphere Studio Enterprise Developer provides tools to work with relational databases including Relational Database Schemas, SQL Wizard, and SQL Query Builder. WebSphere Studio Enterprise Developer:

- Allows you to create, browse, or import database schemas (including new DDL Export capability)
- Enables exploring, importing design, and querying databases
- Supports working with either a local copy of an already deployed design, or creating an entirely new design to meet your requirements
- Provides a meta-data model that is used by all other tools that need relational database information, including connection information, enabling tools that are unaware of each other to share connections
- Provides a visual interface for creating databases, tables, and views
- Supports working with user-defined functions (UDFs) when you are not using a database client that supports user-defined functions (UDFs)
- Supports DB2, DB2 for 400, DB2 for 390, Oracle, Sybase, MySQL, Informix™, SQL Server, Cloudscape, Oracle9i, and DB2 Everyplace™
- Includes new support for DB2 stored procedure user-defined functions (UDFs) builder
- Renders SQL views from specific tables in a database

WebSphere Application Server Log and Trace Analyzer: Examines, analyzes, and correlate logs and traces produced by different components of a deployed system. Log and Trace Analyzer converts log and trace data into a common format and correlates entries from multiple sources, thereby facilitating problem determination and debugging of distributed applications.

- Logging services/agents
WebSphere Host Access Transformation Services

references to the respective announcement letters: offerings. Below is a list of the included offerings with WebSphere Studio Enterprise Developer:

- WebSphere Studio Enterprise Developer, V5.1 media
- IBM Agent Controller: Supports remote profiling and launch/deploy
- Time-based code analysis views
- Log view/analysis

Team development support: The team development environment for WebSphere Studio Enterprise Developer includes support for pluggable repositories and an optimistic concurrency model. The open support for external Software Configuration Management repositories offers a more flexible approach for your chosen Software Configuration Management (SCM) tool and more flexibility in asset maintenance and team development. WebSphere Studio Enterprise Developer:

- Is packaged with adaptors for Concurrent Versions System (CVS) and Rational ClearCase V5. CCLT is also included with Enterprise on Developer.
- Incorporates the new Version Control Management (VCM) interface provided by Eclipse V2 with your SCM vendor for compatibility.

New CCLT enhancements include:

- Enhanced integration with WebSphere Studio
  - Improved synchronization support in WebSphere Studio: Deliver, rebase, and merge manager operations automatically refresh the workspace to reflect changed files resulting from those operations.
  - Improved team development support with IBM Rational XDE®.
  - Improved support for disconnected mode: New option to undo hijacked files as well as a new option “Find new resources to add to source control.”
  - New option to recursively refresh the status of resources under source control.
  - New preference to set the default for the “Keep Checked-out” option when adding new files to source control.
- Universal Change Management (UCM) enhancements, including performance improvements, single-stream project support, read-only streams, support for multiple Project Versioned Object Base (PVOB) sharing components, and improved ClearQuest® integration

Complementary product offerings: Also included in the WebSphere Studio Enterprise Developer, V5.1.1 media packages are a number of complementary product offerings. Below is a list of the included offerings with references to the respective announcement letters:

- WebSphere Host Access Transformation Services (HATS), V5.0
  - Software Announcement 203-293, dated October 28, 2003
  - HATS transforms the screens of a host application into Web pages that are part of a WebSphere application running on a Web server. End users access the pages from their Web browsers and use the pages to send and receive data from the host application. HATS has two components:
    - HATS Studio, running on a client. Using HATS Studio, the application developer creates a Web application in which host screens are transformed into Web pages. HATS Studio runs in the WebSphere Studio Workbench and appears as a perspective in WebSphere Studio Enterprise Developer.
    - The HATS run-time code, running inside one or more HATS applications deployed on WebSphere Application Server. It sends data back and forth between the user and an application on the host. End users interact with the HATS application through their Web browsers.
  - The complementary copy of HATS included with WebSphere Studio Enterprise Development is for development use only. At deployment, user-based licenses must be independently acquired. Refer to the HATS announcement for more information on acquiring HATS licenses.
  - WebSphere Application Server, V5.1
    - Software Announcement 203-319, dated November 25, 2003
  - CICS Transaction Gateway, V5.0
    - Software Announcement 202-145, dated June 11, 2002

  - The complementary copy of CICS Transaction Gateway included with WebSphere Studio Enterprise Development is for development use only. At deployment, processor-based licenses must be independently acquired. Refer to the CICS Transaction Gateway announcement for more information on acquiring CICS Transaction Gateway licenses.
  - DB2 Universal Database® Developers Edition, V8.1 PP2
    - Software Announcement 202-214, dated September 17, 2002

Preview: z/OS-based DB2 stored procedure support

IBM announces the technical preview of z/OS-based DB2 Stored Procedure wizards, build and debugging support. Customers who want to participate in the technical preview to gain early experience with this support should visit the IBM WebSphere Studio Enterprise Developer Web site at http://www.ibm.com/software/awdtools/studioenterprisedev/support

after April 30, 2004, for more information.

Preview: Enhanced COBOL support for Enterprise Beans in WebSphere Application Server for z/OS

IBM announces the technical preview of enhanced run-time support and initial development tools in WebSphere Studio Enterprise Developer that will enable COBOL programs to be dynamically loaded into WebSphere Application Server for z/OS regions. They can be accessed from Enterprise Beans running in those regions. The tools will generate a session Enterprise Beans “wrapper” that represents the procedural COBOL program in the WebSphere region, enabling the business logic in the COBOL program to be accessed in the same way as any other Enterprise Bean. Support will include management of an IBM DB2 connection, so that the COBOL program may access DB2 databases using EXEC SQL statements. Customers who want to participate in the technical preview to gain early experience with this COBOL Enterprise Beans support should visit the IBM COBOL Web site at

http://www.ibm.com/software/awdtools/cobol/zos
for detailed information about availability dates, terms and conditions, COBOL programming restrictions, and prerequisite software levels of WebSphere Studio Enterprise Developer, DB2, and WebSphere Application Server for z/OS.

Previews provide insight into IBM plans and direction. Availability, prices, ordering information, and terms and conditions will be provided when the program is announced. IBM’s plans and intent are subject to change without notice.

**Section 508 of the U.S. Rehabilitation Act**

WebSphere Studio Enterprise Developer is capable as of April 23, 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.

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**Product positioning**

IBM WebSphere Studio is available in several configurations, each designed for a specific need:

**WebSphere Studio Homepage Builder** is an entry-level Web authoring tool. You can create and publish Web sites with ease by using the intuitive WYSIWYG user interface, easy-to-use wizards, templates, and support for JavaScript, Dynamic HTML, and CSS.

**WebSphere Studio Site Developer** is the on-ramp to the WebSphere Studio experience. This robust, easy-to-use development environment helps you to create, build, and maintain dynamic Web sites, applications, and Web services.

**WebSphere Studio Application Developer** is the core application development environment from IBM. It helps to optimize and simplify J2EE and Web services application development with best practices, templates, code generation, and the most comprehensive development environment in its class.

**WebSphere Studio Application Developer Integration Edition** is the complex application development and integration environment. It is the “build to integrate” solution for accelerated development and integration of complex applications.

**WebSphere Studio Enterprise Developer** is the Web and traditional development environment for the enterprise. It brings the power of J2EE, rapid application development, and team support to diverse enterprise application development organizations.

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Education support

WebSphere® Training and Technical Enablement delivers a comprehensive portfolio of education services to help customers successfully deploy and integrate IBM’s WebSphere Application and Integration middleware products to their maximum potential.

Education is a key component to ensuring software success. The WebSphere Training and Technical Enablement team is committed to providing the highest quality education available to help your company prosper in today’s competitive marketplace. We take pride in our ability to deliver successful education programs that provide your people with the skills necessary to make your business profitable using IBM software.

The WebSphere Training and Technical Enablement team works closely with IBM product developers and IBM services organizations to ensure that the courses we offer provide the most up-to-the-minute technical and product information. Our courses place an emphasis on the advanced knowledge and insight that only these sources can provide. We draw from a deep pool of IBM technical experience in the development of our courses, and pass that knowledge on to our students.

For more information about WebSphere Training and Technical Enablement, refer to the Web site:


The following educational offerings are available as listed below:

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<td>Connecting the Enterprise Development Using WebSphere Studio Enterprise Developer V5 Web Services with WebSphere Studio Advanced Web Services File Manager Fault Analyzer Debug Tool Workload Simulator Application Monitor IBM WebSphere Host Access Transformation Services Introduction Advanced HATS IBM HATS Administration of WebSphere Application Server V5 Advanced EJB Development Process Choreographer Async Beans, Access Intent EGL Service-Oriented Architecture CICS AD support for SOAP and XML</td>
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IBM Global Services, IT Education Services, provides education to support many IBM offerings. Descriptions of courses for IT professionals and managers are on the IBM Learning Services Web sites:

http://www-3.ibm.com/services/learning

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.
Software requirements: Following are the software requirements for using WebSphere Studio Enterprise Developer and its optional features. For more details, such as the required components and program temporary fixes (PTFs) for the programs listed below, refer to the softcopy publication Prerequisites for WebSphere Studio Enterprise Developer (SC31-6352). For the most current information on software requirements for WebSphere Studio Enterprise Developer, refer to the product Web site http://www.ibm.com/software/awdtools/studioenterprisedev

Prerequisites for WebSphere Studio Enterprise Developer
- One of the following workstation operating systems:
  - Microsoft™ Windows™ XP Professional with Service Pack 1, or higher
  - Microsoft Windows 2000 Professional or Server, or Advanced Server with Service Pack 2, or higher
  - Microsoft Windows NT™ Workstation or Server V4.0 with Service Pack 6a, or later
- To use Struts tooling

If you wish to deploy Struts-based Web applications outside WebSphere Application Server 4.0 or higher (and outside the WebSphere Application Server test environment of WebSphere Studio Enterprise Developer), refer to the following Web site to obtain the Struts run time (struts.jar for Struts 1.0.2)

http://jakarta.apache.org/struts

Prerequisites for the optional Enterprise Developer for z/OS®
- One of the following host operating systems:
  - z/OS V1.1 (5694-A01), or higher
  - OS/390® V2.10

The following products and other stated software are required to support specific features of Enterprise Developer. The workstation client can be successfully installed without these requisites, however, a stated requisite must be installed and operational at runtime for the corresponding feature to work as designed.

- COBOL compiler — One of the following must be installed on the host to compile COBOL programs developed within Enterprise Developer:
  - IBM COBOL for OS/390 and VM V2.1 (5648-A25)
  - IBM Enterprise COBOL for z/OS V3.1 (5655-G53), or higher
- PL/I compiler — One of the following must be installed on the host to compile PL/I programs developed within Enterprise Developer:
  - IBM PL/I for MVS™ and VM V1.1 (5688-235)
  - IBM VisualAge® PL/I for OS/390 V2.2 (5655-B22)
  - IBM Enterprise PL/I for z/OS V3.1 (5655-H31), or higher
- Debug tool — One of the following must be installed on the host to support remote debugging of COBOL and PL/I programs from Enterprise Developer:

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

Offering information

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.A.) 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

Specified operating environment

Hardware requirements
- Intel™ Pentium™ II processor is required; Pentium III 500 MHz, or higher, is recommended.
- A VGA display of 800x600, or higher, is required; 1024x768 is recommended.
- 512 MB RAM is required; 768 MB RAM, or higher, is recommended.
- 1.57 GB minimum and 2.4 GB maximum (based on NT File System) is required, depending on the optional features selected for installation. This is in addition to space for the resources you develop. Refer to the Installation Guide for an account of space requirements according to each aspect of the installation process.

Software requirements: Following are the software requirements for using WebSphere Studio Enterprise Developer and its optional features. For more details, such as the required components and program temporary fixes (PTFs) for the programs listed below, refer to the
- IBM Debug Tool for z/OS and OS/390 V3.1 (5655-H32)
- IBM Debug Tool for z/OS V4.1 (5655-L24)

- CICS Transaction Server — One of the following must be installed on the host to support applications with embedded CICS statements:
  - IBM CICS Transaction Server V1.3 (5655-I47), or higher
  - IBM CICS Transaction Server for z/OS V2.2 (5697-E93)
- IMS/ESA® — One of the following must be installed on the host to support applications using IMS™ database and data communications:
  - IMS/ESA V6.1 (5655-I58), or higher
  - IMS/ESA V7.1 (5655-B01), or higher
- DB2 UDB — One of the following must be installed on the host to support DB2 UDB for z/OS or OS/390:
  - DB2 UDB V6.1 (5645-DB2), or higher
  - DB2 UDB V7.1 (5675-DB2), or higher
- Software Configuration and Library Manager (SCLM) — One of the following must be installed on the host to support access to SCLM:
  - REXX/370 Library, or Alternate Library, V1.3 (5695-014)
- IBM HTTP Server — One of the following must be installed and configured on the host in order for you to send files to the host and receive files from the host:
  - IBM HTTP Server for OS/390 V5.3 (5647-A01)
  - IBM HTTP Server for z/OS V5.3 (5694-A01)
- Unicode support — Unicode support is required for the XML enablement feature of Enterprise Developer. Unicode support is part of z/OS V1.2, or higher.
- Microsoft Loopback Adapter — You must install and configure the Microsoft Loopback Adapter on your workstation in order to use the z/OS application development tools feature of Enterprise Developer

**Prerequisites for included complementary offerings**

Also included in the WebSphere Studio Enterprise Developer media package are a number of complementary product offerings. For a list of the included offerings, refer to Complementary product offerings in the Description section. Refer to the separate complementary product offerings’ announcement letters, listed in the Description section, for software requirements for those complementary products.

**Compatibility:** The WebSphere Studio Enterprise Developer V5 Enterprise Generation Language (EGL) language support has been removed from this release of WebSphere Studio Enterprise Developer.

EGL in WebSphere Studio Enterprise Developer V5.0 supported the creation of full-function Java and COBOL applications that deliver enterprise data to browsers; implements business logic; facilitates code preparation and deployment with automated procedures.

IBM plans to again add EGL Language Support, with significant extensions, to WebSphere Studio Enterprise Developer later in 2004. These extensions will provide additional new application development capabilities for both Web and traditional text applications as well as enable migration and execution of existing VisualAge Generator V4.5 applications for selected platforms and data sources.

As an aid to the overall migration process, there will be a conversion utility provided to move existing application source code, including Web transaction, text-based, and Batch, from VisualAge Generator V4.5 to the new EGL syntax and eclipse-based projects.

Existing customers of VisualAge Generator V4.5 should continue to use this technology until the EGL language support is available. Customers using older versions of VisualAge Generator or Cross System Product should consider migrating all development to VisualAge Generator V4.5, or only the source code as a first step in utilizing the VisualAge Generator to EGL conversion utility. Contact your IBM representative for more information regarding available resources and other items that would help in making these choices.

Previews provide insight into IBM plans and direction. Availability, prices, ordering information, and terms and conditions will be provided when the program is announced. IBM’s plans and intent are subject to change without notice.

**Planning information**

**Direct customer support:** 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 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 Enterprise Developer Passport Advantage media package is distributed with basic machine-readable material on CDs.

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

**Security, auditability, and control**

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

<table>
<thead>
<tr>
<th>Licensed function title</th>
<th>Product group</th>
<th>Product category</th>
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<tbody>
<tr>
<td>WebSphere Studio Enterprise Developer</td>
<td>IBM</td>
<td>WebSphere Tools</td>
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**IBM WebSphere Studio Enterprise Developer** has the following charge structure: Users

### WebSphere Studio Enterprise Developer licenses

#### Part description

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### Passport Advantage supply

#### Program name/ description

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<td>WSED V5.1.1 (not including VisualAge offerings) Windows CD-ROM Digit</td>
<td>BA0CHML</td>
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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.

<table>
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**WebSphere Studio Enterprise Developer V5.1.1**

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<th>Media packs description</th>
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<tr>
<td>WebSphere Studio Enterprise Dev User</td>
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Cross-platform product for use on IBM eServer zSeries

Order the part numbers below when there is an intention to acquire this cross-platform product for deployment on the zSeries S/390® platform. This set of part numbers provides the identical supply and authorization as the other set in this announcement. The distinction is to identify the planned deployment platform.

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</table>

Terms and conditions

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

Licensing: IBM International Program License Agreement. Proofs of Entitlement (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 number(s)

Program name/Program number/Form number

WebSphere Studio Enterprise Developer 5724-B67 L-BPAL-5UBMUW

Limited warranty applies: Yes

Warranty: This program has warranty for a minimum of one year from acquisition from IBM or authorized Business Partner. The warranty provided to the customer, for at least one year from acquisition, is access to databases (read Web sites) for program information, FAQs, including any known fixes to defects, which the customer can download or obtain otherwise and install at their leisure.

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

Product name/ Copy and use on home/portable computer?

WebSphere Studio Enterprise Developer No

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

WebSphere Studio Enterprise Developer V5.1.1 media packs contain complementary offerings. No license for use of any of the complementary offerings is granted by the license for use of WebSphere Studio Enterprise Developer, and use of complementary offerings contained in the WebSphere Studio Enterprise Developer media pack is subject to restrictions. In order to use any one of the complementary offerings outside of the usage restrictions, you must obtain a license for the offering.

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 announced in this letter are 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 (1) routine, short duration installation and usage (how-to) questions; and (2) 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 (1) the design and development of applications, (2) your use of programs in other than their specified operating environment, or (3) 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

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IBM Operational Support Services — Support Line: No
iSeries™ Software Subscription applies: No

Educational allowance available: Not applicable

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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

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Order now

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

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Fax: 800-2IBM-FAX (242-6329)
Internet: ibm_direct@vnet.ibm.com
Mail: IBM Americas Call Centers
Dept: IBM CALL, 6th Floor
105 Moatfield Drive
North York, Ontario
Canada M3B 3R1

Reference: SE001

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Note: Shipments will begin after the planned availability date.

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Java is a trademark of Sun Microsystems, Inc.
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