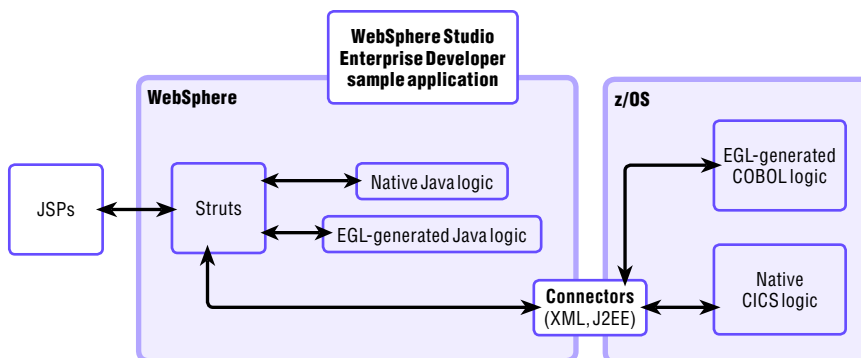


WebSphere® software

## IBM WebSphere Studio Enterprise Developer, Version 5.0

### Highlights

- **Helps simplify the skills needed to develop component-based Web applications**
- **Lets you rapidly create well structured e-business systems that integrate WebSphere software and traditional transactional environments, 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 of an open Struts-based MVC model to help make application development intuitive and easy**
- **Supports the collaboration of team members in the development process**
- **Helps developers create dynamic Web applications including support for J2EE, XML and Web services technologies**



WebSphere Studio Enterprise Developer simplifies the J2EE application process by providing a Struts-based visual component construction environment.

Today's applications weren't created by super technologists working in a vacuum. They're created by teams of people with varying levels of technology backgrounds and areas of expertise. E-business success dictates that you build robust Web applications and services. You need to leverage various technologies and skills sets, and exploit existing and new Web technologies to speed you through the entire development process.

IBM WebSphere® Studio Enterprise Developer brings the power of Java™2 Platform Enterprise Edition (J2EE), Rapid Application Development (RAD) and team support to diverse enterprise application development organizations. Designed for professional developers and integrators of Web services and advanced Java technology-based applications, WebSphere Studio Enterprise Developer includes visual modeling and development tools to help create, deploy and maintain enterprise Web applications.

WebSphere Studio Enterprise Developer 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 applications. WebSphere Studio Enterprise Developer supports a broad range of developers, with added flexibility and the ability to integrate with your existing applications. Create Web applications by melding diverse employee skills sets and extending existing systems. And take advantage of proven runtime environments while helping reduce your deployment risks. WebSphere Studio Enterprise Developer offers integrated development environments (IDE) with advanced, easy-to-use tools and features to help developers rapidly design, code and deploy complex applications.

- **Visual builder**

*Provides a visual component construction environment based on Struts, an open source implementation of the model-view-controller (MVC) component architecture; 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.*

- **EGL support**

*Provides Enterprise Generation Language (EGL) support to create full-function Java and COBOL applications that deliver enterprise data to browsers; implements business logic; facilitates code preparation and deployment with automated procedures.*

- **Java development**

*Helps create Java code; enables incremental compilation and provides a common local and remote debugger benefit; includes Java source file tools to search, compare and merge code and refactoring tools to help reorganize Java applications.*

- **IBM z/OS development**

*Provides an interactive, workstation-based environment that provides quick access to IBM z/OS® (formerly IBM S/390®) datasets; creates ASM, COBOL or PL/I code; create IBM CICS® system-based code, IBM IMS™ and Structured Query Language (SQL) statements.*

- **Web development**

*Helps develop creative and data-rich Web-based applications; provides a visual layout tool to help you write JavaServer Pages (JSP) and HTML, as well as a wizard to develop servlet code; lets you create Web applications from database queries and beans; includes graphic-design software for producing static and animated output; supports J2EE coding and deployment.*

- **Analysis and performance profiling**

*Collects and presents Java runtime data in graphical and non-graphical views; helps to detect application performance issues early in the development cycle and improve overall system efficiency.*

- **J2EE platform support**

*Features full Enterprise JavaBeans (EJB), Version 1.1 support, Web Archive (WAR) and Enterprise Application Archive (EAR) deployment support; an updated EJB test client and an enhanced unit-test environment to create multiple projects with different unit-test configurations.*

- **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 as well as CICS, IMS/DC and batch debugging of COBOL, PL/I and assembler applications.*

- **Web services deployment**

*Helps build and deploy Web services-enabled applications across a broad range of platforms; offers tools to ensure conformance to standards such as UDDI for Java, SOAP and WSDL.*

- **Relational database**

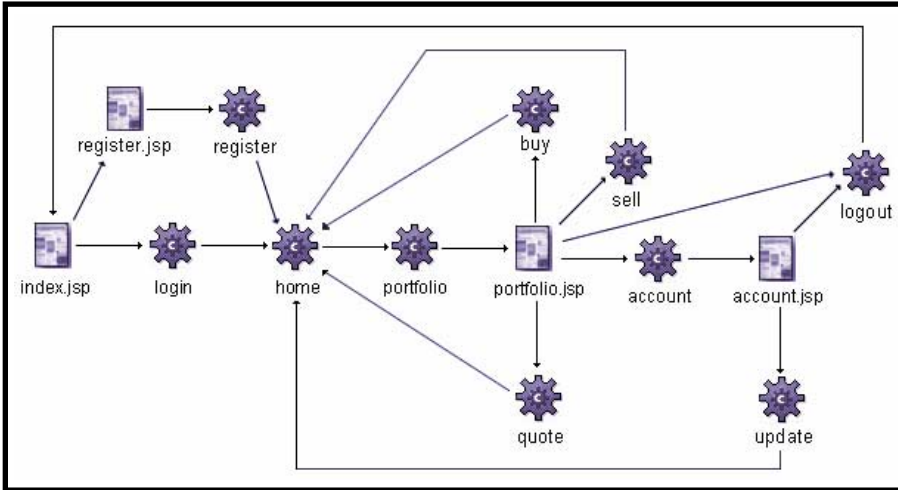
*Helps create and manipulate project data design as relational database (RDB) schemas; writes queries against local and remote data.*

- **XML development**

*Offers ability to create, view, edit and validate document-type definitions (DTD) and XML schemas, transform XML documents into text, HTML or other XML document types; integrates relational databases and XML.*

### **Simplify 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 allows teams to reuse proven and reliable capabilities, instead of duplicating their development efforts.



WebSphere Studio Enterprise Developer application flow.

WebSphere Studio Enterprise Developer combines visual construction of complex Web systems with Struts-based MVC component architecture. MVC architecture creates components and simplifies 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 and EGL component processing in the supported WebSphere and z/OS environments. You can quickly change environments as your business needs change. Developers with varied skills sets can easily maintain Web applications and help save future development costs.

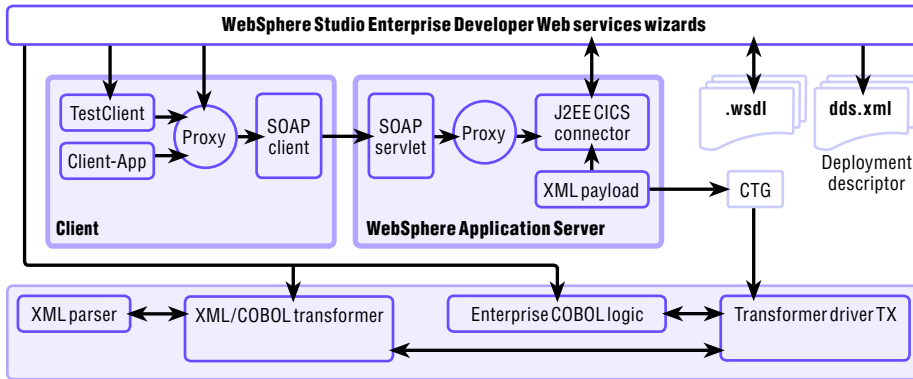
To help support the Struts framework, WebSphere Studio Enterprise Developer includes a visual builder that maps out applications to facilitate a faster understanding of the flow, structure and components of Struts-based Web applications. Developers have quick access to resource-appropriate editors and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

## Extend IBM WebSphere Studio Workbench technology

WebSphere Studio Enterprise Developer is built on WebSphere Studio Workbench technology, so 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.

## Bridge the skills gap with Enterprise Generation Language

Some application developers are more experienced in middle-tier, Java-based programming models. Others have little Web expertise and focus instead on the business environment, while some developers are more familiar with traditional transactional environments like CICS. You need a high-level programming language-like EGL that allows developers from diverse technical backgrounds to quickly write full-function applications. Which can ultimately result in Web-oriented Java applications as well as traditional COBOL applications. Supported by WebSphere Studio Enterprise Developer, EGL is a fourth-generation programming language that can speed the development of applications in either Web or traditional transactional environments.



WebSphere Studio Enterprise Developer lets you create dynamic Web applications.

EGL allows developers to implement business logic through a simple procedural language that hides the technological details of databases accessed through SQL, messages sent or received with IBM MQSeries® or environmentally specific commands executed in CICS.

Its automated procedures help facilitate code preparation and deployment. With the capability to extract difficult development processes — like I/O handling, message handling and error-handling — EGL support gives developers the ability to quickly create applications. And their applications can potentially run as Java applications in either the middle-tier or the Enterprise Information System (EIS) tier (such as CICS systems) of a Web application. Developers can write code in one target platform and easily convert applications for use on another platform. This means developers can code for current platform requirements without worrying about future migration.

### Enhance development capabilities with leading-edge servlet, JSP and EJB 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 preserves investments and reduces development time. With WebSphere Studio Enterprise Developer, you can define JSPs and servlets and map entity beans to databases; generate EJB tools to access transaction processing systems to better leverage your investments and help lower the cost of retooling, integrating and updating existing applications. WebSphere Studio Enterprise Developer offers a fully supported EJB, Version 1.1 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 IBM WebSphere Application Server.

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

### Provides a robust XML toolset, including support to build Web services quickly

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 realtime with minimal human input.

WebSphere Studio Enterprise Developer includes a comprehensive XML toolset to help you build DTDs, XML schemas and files and 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 UDDI, SOAP and WSDL standards.

## 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, CICS and IMS transactional environments. The testing and debugging process begins early in application development, with breakpoint and monitor-testing capability available in the visual assembly 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, distributed code profiling and unit-testing. WebSphere Studio Enterprise Developer 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.

## A total e-business solution

From creating a dynamic, interactive Web site to conducting large volumes of e-commerce transactions, the IBM WebSphere software platform for e-business can help you build, manage and launch robust, security-rich, portable e-business applications that meet your unique business requirements:

- *Get your e-business up and running with new applications that can integrate with existing ones.*
- *Help enhance customer satisfaction by delivering a meaningful purchasing experience and prompt, personalized service.*
- *Adapt as markets shift and business goals evolve.*
- *Conduct business on a genuinely global scale, whether you're a startup or a large enterprise.*
- *Streamline your supply chain by collaborating with trading partners and suppliers.*

The WebSphere software platform has the award-winning, proven offerings you need to create a total e-business solution — regardless of the business you're in.

## For more information

To learn more about IBM WebSphere Studio Enterprise Developer, visit:

**ibm.com**/software/ad/adstudio

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## IBM WebSphere Studio Enterprise Developer

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### Hardware requirements

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- Intel® Pentium® II processor or higher recommended
  - SVGA (800x600) display or higher (1024x766 recommended)
  - 256MB RAM minimum
  - 400MB minimum available disk space
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### Software requirements

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- TCP/IP installed and configured
  - Microsoft® Windows® 2000 or Windows XP
  - Microsoft Internet Explorer 5.5
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