IBM

Rational software

IBM Rational Web Developer
for WebSphere Software Version 6.0

Highlights

- **Accelerate Web, Java and SOA development using RAD tools and wizards**

- **Leverage existing skills and shorten the Java learning curve with drag-and-drop UI components and point-and-click database connectivity**

- **Integrate your business applications with WS-I compliant Web services and service-oriented architectures**

- **Streamline application testing with integrated unit test environment and visual debugger**

- **Adapt and extend your development environment with Eclipse-based plug-ins to match your needs**

- **Track activities, help ensure quality and manage versions and releases via integration with the IBM Software Development Platform**

Rapidly build and maintain applications for on demand business

Developers who are building applications for an on demand business need tools that are intuitive to use and that make complex tasks as simple as possible. IBM® Rational® Web Developer for WebSphere® Software is that kind of tool.

Web Developer is an integrated development environment that makes Web, Web services and Java development quick and easy. With a broad range of visual development, testing and deployment tools that are easy to learn and use, Web Developer is a perfect fit for software developers who are new to Java or who don't need to build their own EJB components.

Web Developer is powered by the Eclipse open source platform so you can adapt and extend your development environment to match your needs and increase productivity. When used with the IBM Software Development Platform, you can access a broad range of requirements and change management functions directly from Web Developer.
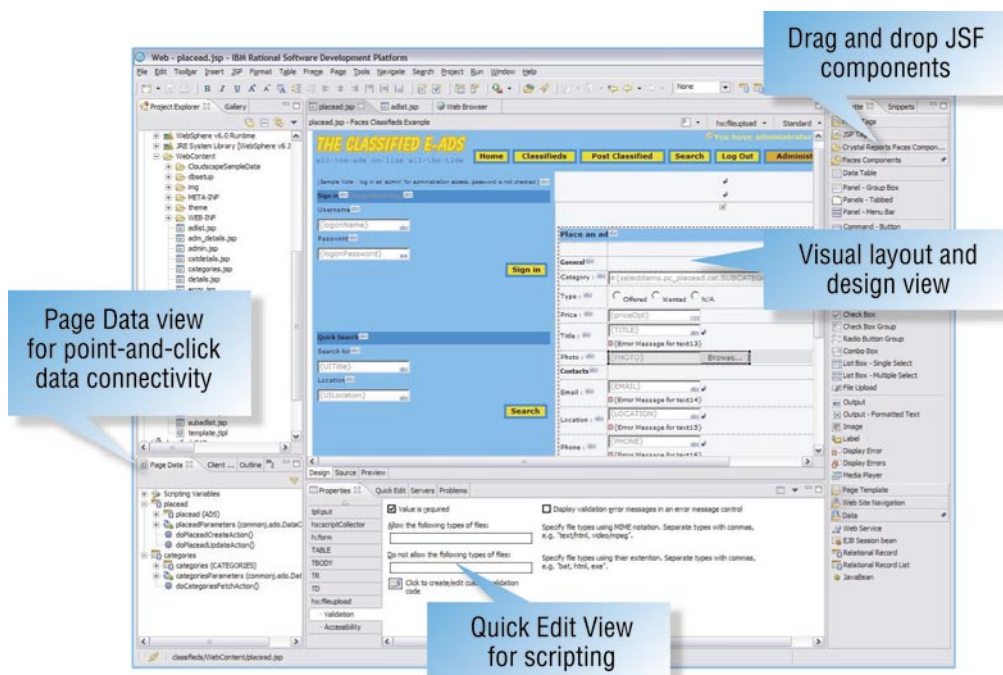

Figure 1. Use the Page Designer to visually layout and design Web pages. Drag and drop re-usable JavaServer Faces UI components to rapidly build rich user interfaces. Point and click to connect the UI to data sources, including relational databases and Web services.

IBM Rational Web Developer for WebSphere Software is optimized for WebSphere software and provides capabilities for development on other technology platforms. Rational software helps organizations become more respon-sive, resilient, and focused by improving their software development capability.

WebSphere. software

ON **DEMAND BUSINESS**™

Simplify Web development and Web site management

Rapid Application Development (RAD) tools and wizards bring virtually all aspects of Web development (HTML, JSP, JSF and servlets) into a common interface and enable developers with diverse technical backgrounds, and even those unfamiliar with Java, to quickly build rich, data-driven applications.

- *Visually map and construct Web applications using Model-View-Controller design and the Struts 1.1 and/or JavaServer Faces frameworks*
- *Quickly build rich Web user interfaces and Web forms with reusable, drag-and-drop JavaServer Faces components that generate the event handling, user input validation and data binding for Web applications*

- *Connect your Web applications to relational databases , EJB components and Web services using simple point-and-click tools that support Service Data Objects, an emerging industry standard for accessing heterogeneous data*
- *Build interactive Web user interfaces with the performance and maintenance characteristics of thin clients using Faces client components that extend the JSF specification*
- *Easily build rich-function Web pages in a visual or source editing mode using the advanced-function HTML and JSP editor*
- *Rapidly import an entire Web site, change styles and apply them globally, and visually add or delete pages from a tree-structure view using the Web Site Designer*
- *Create and animate original art with drag-and-drop ease using the WebArt Designer and Animated GIF Designer components[1]*

Code in a 4GL and generate to Java

Enterprise Generation Language (EGL) is a fourth generation language that enables procedural developers to rapidly develop and debug data-driven Web applications and business logic using familiar programming constructs and without coding in Java. EGL incorporates constructs and functionality from Informix 4GL to make Web Developer a perfect development environment for Informix developers. EGL is tightly integrated with JavaServer Faces so you can build highly interactive, data-driven Web applications using JSF components.

Integrate applications using Web services and service-oriented architectures

Web Developer includes the tools you need to discover, create, build, test, deploy and publish WS-I compliant Web services. Build new Web services from scratch or enable existing applications for Web services to ease integration and reuse.

- *Automatically generate from your existing assets the WSDL and WSIL files needed to describe your Web services and prepare them for inspection, or design a WSDL file and generate the Java code*
- *Easily create, validate and detect WS-I compliant, interoperable Web services using the WSDL editor and Web services explorer*

- *Encode input and output messages with SOAP*
- *Create a Java proxy to interface with client applications*
- *Generate Web services test clients without coding*
- *Deploy to the UDDI, Version 2 registry*

Simplify XML development

The comprehensive XML functions within Web Developer help you create, edit and transform XML documents.

- *Visual tools for creating and viewing XML files and for automatic validation against document type definitions (DTD)*
- *Visual tools for mapping XML elements to relational database tables*
- *Tight IBM DB2 integration for composing XML documents from existing DB2 data or for deconstructing XML documents into DB2 data*
- *Time-saving tools for building and debugging Extensible Stylesheet Language (XSL) transformation scripts and for transforming XML documents to other markup formats such as HTML.*
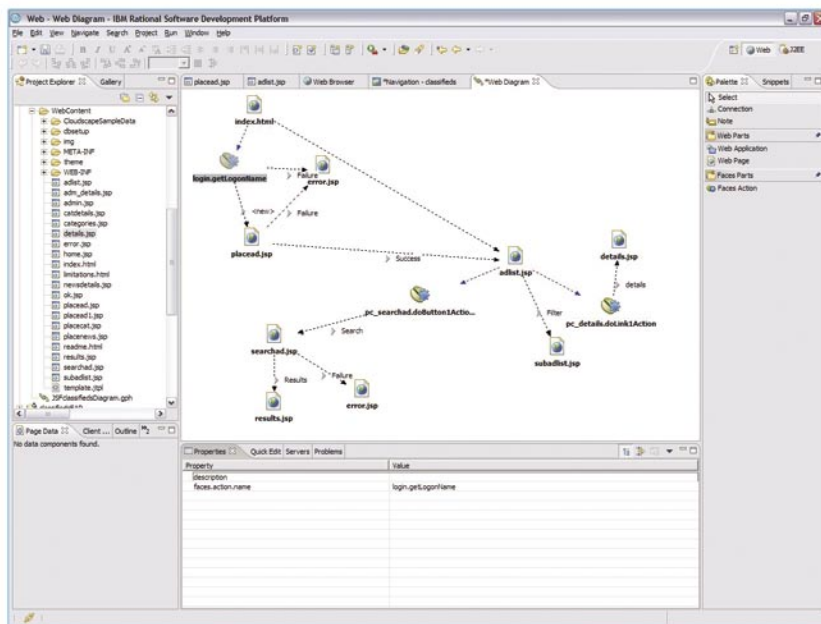

Figure 2. Use the Web Diagram Editor to visually map and construct Web applications using the Struts open source framework or JSF components. By visually diagramming the logic-driven page flows, the underlying code and configuration files are automatically generated, enabling Web applications to be designed and constructed very quickly. Both JSF and Struts separate business logic from the UI making applications easier to maintain.

Build database-driven applications

Web Developer provides integrated tools to create database-driven applications from queries and beans. The database connection wizard makes it easy to establish a Java Database Connectivity (JDBC™) connection to a database—like IBM DB2 Universal Database™, IBM Informix®, Oracle or Microsoft® SQL Server®.

The SQL query wizard and SQL query builder provide a visual interface for creating and executing SQL statements. You can create a simple query using the SQL query wizard, or you can use the SQL query builder that supports a wider range of statements. A built-in SQL-to-XML wizard helps you create XML and XSL documents, DTD specifications and Extensible Stylesheet Definition (XSD) schemas, HTML files and related artifacts. SQL for Java (SQLJ) support enables you to rapidly create and debug applications using SQLJ and DB2 SQLJ Stored Procedures.

Quickly build Java applications with visual tools

Web Developer includes robust tools for building Java applications and supports Java Development Kit version 1.4.2. The Visual Editor for Java lets you create Java GUIs with drag and drop ease using either Abstract Window Toolkit (AWT), SWT, or Swing components and allows you to visually bind data to UI widgets and see GUI design changes immediately with dynamic updates between the source code and the visual design.
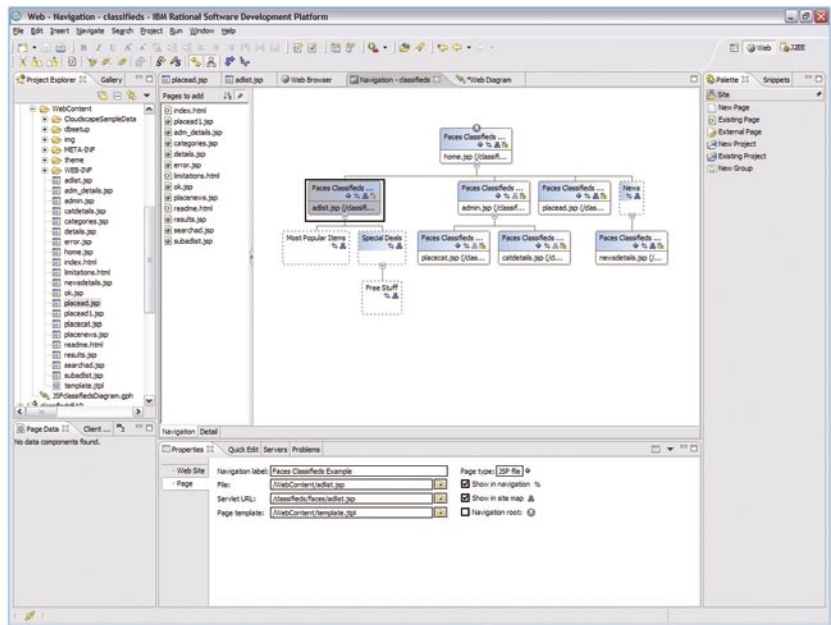

Figure 3. Use the Web Site Designer to create, import and manage entire Web sites. Double-click on a Web page in Site Designer to open the page for editing in Page Designer. Create page templates to ensure your Web site follows a consistent design. The Navigation view shows your site pages as a hierarchy and makes it easy to add, delete or move pages. When your site structure changes, navigation links are automatically regenerated.

Streamline application testing

Integrated unit test environments and a visual debugger make developers more productive and lower total development costs by providing a full test server on the local machine. Web Developer provides an environment to rapidly test and debug local and server-side code on WebSphere Application Server, WebSphere Portal and Apache Tomcat.

- *Create and configure server instances using the built-in wizards or Web Developer can create them automatically*
- *Step through applications and set breakpoints; change code on the fly at a breakpoint and resume debugging without restarting the application*
- *Test client-side JavaScript and Active Script using Active Script Debugger*

- *Create, test and deploy applications to BEA WebLogic Server Version 6.1, 7.0 and 8.1 using IBM Rational Deployment Toolkit for WebLogic Server.*

Improve team productivity with effective change management

To create engaging Web applications quickly and cost-effectively, you depend on the diverse, collaborative input of your entire development team including graphic designers, developers and business analysts. Web Developer is tightly integrated with IBM Rational ClearCase and IBM Rational ClearQuest software configuration management solutions. This deep integration enables a wide range of change management operations to be performed directly from within Web Developer, and allows

an integrated view of projects that helps to increase both collaboration and team productivity. Web Developer also provides support for Concurrent Versions System and third-party software configuration management systems through plug-ins.

The Rational Advantage

Rational Web Developer is built on the Eclipse open source platform so you can adapt and extend your development environment with Eclipse plug-ins from IBM, IBM Business Partners and the Eclipse community to match your specific needs. And when Rational Web Developer is used with the IBM Software Development Platform, you can access a broad range of requirements and change management functions directly from Rational Web Developer and enjoy an unprecedented level of integration across the development lifecycle.
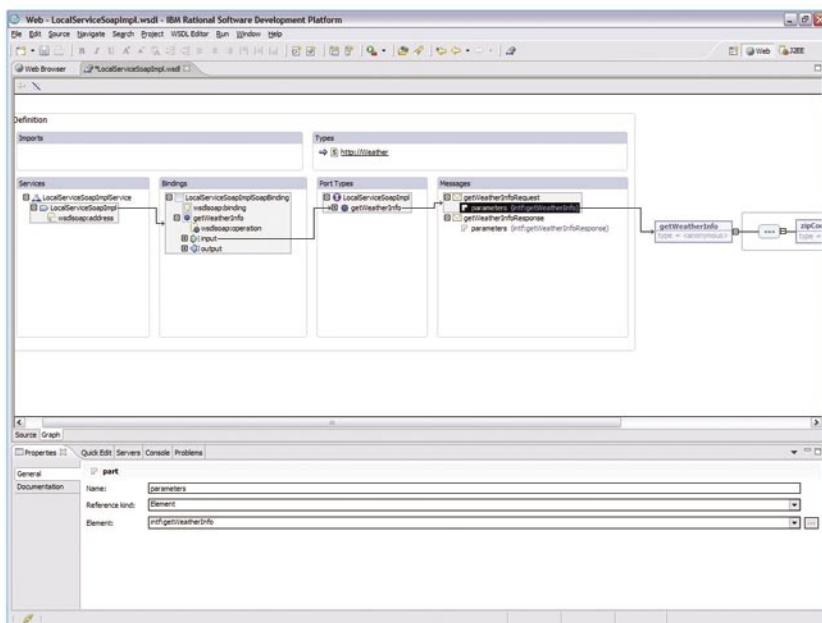

Figure 4. The WSDL Editor makes it simple to define ports and messages for your Web services.

About Rational software

Rational® software from IBM helps organizations automate and integrate the core business process of software development. Rational products, services and best practices power the IBM Software Development Platform, the premier platform for teams who discover, develop, and deploy software assets in business applications, embedded systems, and software products. This modular and complete solution enables teams to adopt a business-driven development approach based on open standards, including the Eclipse open source framework. The result is differentiated business performance. Additional information is available at **ibm.com/rational** and **ibm.com/developerworks/rational/rationaledge**, the monthly e-zine for the Rational community.

For more information

To learn more about
IBM Rational Web Developer for
WebSphere Software version 6.0, visit:
ibm.com/software/awdtools/developer/web/index.html

Eclipse

Eclipse is an award-winning, open source platform for the construction of powerful software development tools and rich desktop applications. Leveraging the Eclipse plug-in framework to integrate technology on the desktop saves technology providers time and money by enabling them to focus their efforts on delivering differentiation and value for their offerings. Full details on Eclipse are available at **www.eclipse.org**.

IBM Rational Web Developer for WebSphere Software, Version 6.0 at a glance

Hardware requirements

- Intel® Pentium® III 800 MHz or higher recommended
- Display, minimum requirements: 1024 x 768
- 768MB RAM minimum; 1GB RAM recommended
- Disk space requirements: 3.0GB minimum for installing Web Developer and additional disk space for development resources (minimum disk space can be reduced if optional features and run times are not installed).

Software requirements

- Windows 2000 Professional (SP3 or 4), Windows 2000 Server (SP3 or 4), Windows 2000 Advanced Server (SP3 or 4), Windows XP (SP1 or 2), Windows Server 2003 Standard, Windows Server 2003 Enterprise
- Red Hat Enterprise Linux Workstation, Version 3.0 (all service packs), or SUSE LINUX Enterprise Server, Version 9 (all service packs)
- Browsers:
  - For Windows: You will need a Web browser to view the readme files and the installation Guide. To view certain tours and tutorials that are included with the online help you will require the Flash Player, Version 6.0r65 or later.
  - For Linux: You will need a Web browser to view the readme files and the installation Guide. If you are working on Linux, you must have Mozilla 1.4 installed before you can run Rational Web Developer. To view certain tours and tutorials that are included with the online help you will require the Flash Player, Version 6.0r69 or later.
- TCP/IP installed and configured

Note: Java Runtime Environment (JRE) Version 1.3 must be installed
to profile your applications.

Run-time environment support

- WebSphere Application Server - Express (Version 5.0, 5.1 or 6.0) installed locally
  or remotely
- WebSphere Application Server (Version 4.0, 5.1 or 6.0) installed locally or remotely
- Apache Tomcat (Web application support only)

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