



VisualAge Generator, Version 4.5

Highlights

Simplifies development of MQSeries® business integration solutions

Enables developers without Java™ skills to create scalable e-business systems for the WebSphere™ Application Server environments

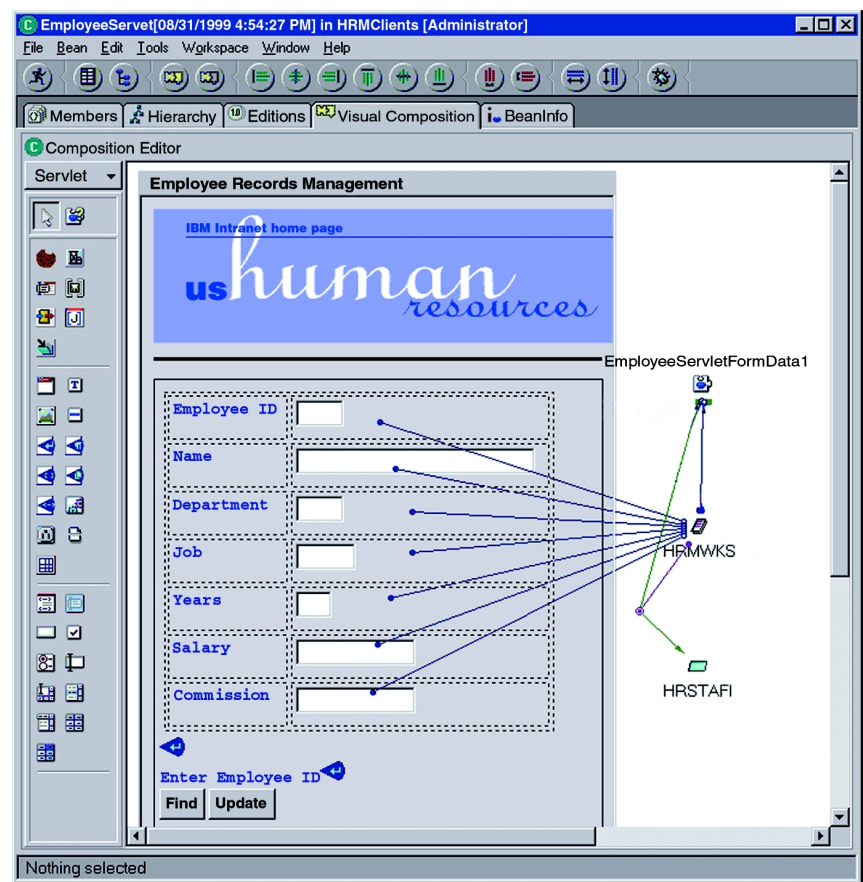
Generates Java for Microsoft® Windows® 2000 and Windows NT® servers, as well as server programs for OS/390®, Sun Solaris™, AIX®, Hewlett-Packard HP-UX, OS/400®, OS/2®, VM, and VSE, rendered as session Enterprise JavaBeans™ components

Provides an integrated VisualAge® for Java based development and test environment for the creation of Java clients and transactional server programs

Speeds development of systems accessing legacy data by providing support for DL/I databases, VSAM files, and OS/400 files

IBM VisualAge®, Generator is a powerful, high-end, rapid application development environment for building and deploying e-business, multi-tier, and text applications. It offers versatile solutions with scalable, multi-platform exploitation across networked systems. The highly productive development facilities of VisualAge Generator are designed to simplify and shield the complexities of all

supported topologies. This allows developers with little or no Java expertise to implement end-to-end Java e-business systems, and also enables OO and Java developers to implement systems running on traditional transactional platforms, such as CICS or IMS, and accessing legacy data (e.g. DL/I, VSAM) with no need to become mainframe experts.



IBM VisualAge Generator integrates with IBM VisualAge for Java, Enterprise Edition, providing a simplified approach for creating multi-tier e-business systems.



Award-winner for enterprise development and mission-critical operations

MQ Series rapid development

VisualAge Generator now provides a powerful facility that dramatically reduces the amount of coding required to implement application systems that communicate through message queuing. This rapid development support for MQ Series facilitates the implementation and test of distributed business integration systems, speeding the deployment of business to business (B2B) e-business requirements.

Integrated Java development environment

VisualAge Generator provides support for Internet and intranet applications by allowing you to create Java™ clients, such as applets, servlets and Java GUIs, as well as new transactional server programs. VisualAge Generator is fully integrated with IBM VisualAge for Java or IBM VisualAge Smalltalk, which enables hundreds of parts from IBM and from third-party developers to be reused within VisualAge Generator applications. To supplement the visual programming components, programmers have the option of writing code in 4GL, Java or both languages.

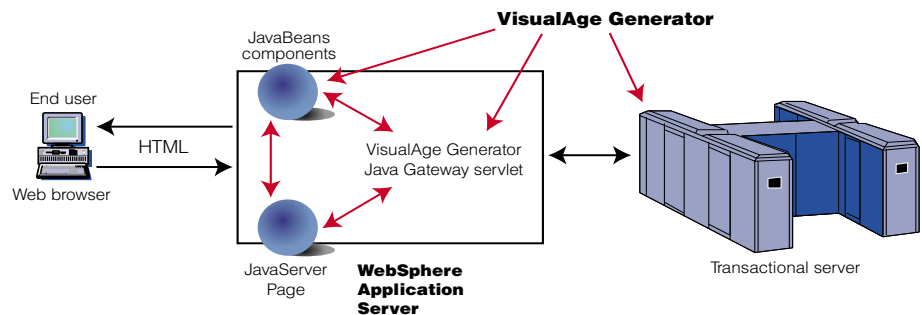
Generation of JavaBeans components

VisualAge Generator generates Java for clients, web application servers, and Windows 2000 and Windows NT server environments. VisualAge Generator creates applets, servlets, and GUI's as

Java clients. To simplify access from these clients to transactional servers, VisualAge Generator creates a session Enterprise JavaBean. This Enterprise JavaBean handles all aspects of communicating with the transaction server, including marshalling data from objects to server structures, converting data between Java and host formats, and controlling commit or rollback for multiple units of work within a transaction. New in this release is support for server-side Java generation, creating back-end servers to access relational data using Java and JDBC. Now, VisualAge Generator developers can create an entire Java application system with little or no Java skills required. Through its Java generation support for web application servers, VisualAge Generator can quickly bring your business to the Web, providing the ability to develop e-business systems for an extensive group of server environments and data sources.

WebSphere rapid development

Web systems are rapidly evolving to multi-tier, server-driven architectures, wherein server-driven content is displayed to the end user in dynamic Web pages, driven by Web server technology such as JavaServer™ Pages (JSP) components. Thus far, tooling for Web applications has been client-centric. Client-centric tools provide little assistance for handling the complexities of the mid-tier level, leaving programmers to write detailed, low-level code to handle data conversion, session state management and server connectivity. Gaining the skills required to develop such server-driven Web systems is time-consuming and expensive. The market demands a higher level of tooling for server-driven Web applications.



e-business application created using the rapid application development capabilities provided by VisualAge Generator.

Simplified approach

VisualAge Generator provides a simplified programming approach to help create multi-tier e-business systems, allowing you to leverage existing skills. VisualAge Generator automatically generates Java code for the middle tier, which handles data conversion, state management and server connectivity. VisualAge Generator also generates transactional server code. With the IBM WebSphere rapid application development programming approach, testing of the Web program is done on the developer's workstation, using the VisualAge Generator interactive test facility and a Web browser. This eliminates the need to set up a full, n-tier runtime infrastructure for each developer and speeds up the development cycle.

Reduced cost of entry for e-business

A default JSP component is automatically generated from the server program, providing default HTML for display in the end-user's browser. This JavaServer Page component can then be enhanced by the Web designer using IBM WebSphere Studio. The VisualAge Generator user-interface record, a data structure which contains the information

that will be displayed in the Web browser, provides a clear separation of concerns between the Web designer and the enterprise developer. The power of VisualAge Generator WebSphere rapid application development solution is that it leverages existing skills, reducing the cost of entry for e-business.

Extreme rapid application development with VisualAge Generator templates

Data-model-driven automatic code generation provides extremely rapid application development and higher-quality applications. Efficient and fully operational n-tier application systems, based on a business information model, are generated without time-consuming coding tasks. Templates standard functions, delivered with VisualAge Generator, provide a large portion of the code required in a typical business application, allowing your programming staff to focus on the business logic specific to your organization's needs. With one set of template definitions, you can generate multiple user interfaces—for example, Java, GUI and text user interfaces, all accessing the same server programs. IBM VisualAge Generator Templates Customizer, a separately orderable product, allows you to customize template generators to meet your unique business requirements.

Enterprise scalability

Used to build high-transaction-rate applications, such as banking and insurance systems, VisualAge Generator provides support for large, multi-tier, heterogeneous enterprise solutions, scaling from workstations all the way to IBM OS/390® servers. VisualAge Generator applications can be deployed to the following n-tier environments: Web browsers and Microsoft® Windows NT®, Windows® 95, Windows 98, IBM OS/2®, IBM OS/400®, IBM AIX®, Hewlett-Packard HP-UX, IBM VSE, IBM VM, OS/390 and Sun Solaris™ operating environments. VisualAge Generator produces optimized Java code for clients, Web application servers, and Windows 2000 and Windows NT server programs as well as high-performing COBOL or C++ source for server programs. Applications can be automatically regenerated for a different runtime environment without modifying source code. Team development support is integrated into VisualAge Generator, providing software configuration management and version control. This allows developers to work on complex projects as a team and rebuild any current or previous level of code. VisualAge Generator enables you to capitalize on existing programming skills, thus allowing you to create applications that utilize new technologies with minimal additional training.

Handle the load with middleware

VisualAge Generator provides an open system environment for enterprises requiring the ability to mix and match underlying databases, operating systems and protocols. It hides the complexities and time-consuming process of programming to underlying system interfaces. VisualAge Generator includes middleware support for advanced program-to-program communication (APPC), TCP/IP, DCE, Client Access/400, IMS™/TM, IBM CICS®, and it also leverages IBM MQSeries®. VisualAge Generator includes support for the entire IBM DB2® family, IMS/DB, DL/I, VSAM, native Oracle and other non-IBM relational data through ODBC as well as IBM DataJoiner®.

Interactive test facility

VisualAge Generator provides you with one of the best debugging facilities available. The interactive test facility (ITF) provides all but the final system testing before the application is generated and compiled. Using IBM DB2 Connect™, ITF tests DB2 data where it is, rather than requiring the tester to move it to the development workstation. In addition during testing, VSAM and DL/I data can be accessed remotely on OS/390 and VSE as well as remote OS/400 files, eliminating the need to reproduce the data on the developer's workstation. ITF includes a test coverage analysis tool that monitors which code paths of the application have been executed. ITF is equipped with a dynamic application partitioning analysis facility, which helps determine the most effective program distribution on the network prior to deploying the system in production.

Accompanying services

IBM and IBM Business Partners provide training, as well as services for installation, customization, migration and mentoring.

WebSphere software platform: building on a firm foundation

VisualAge Generator is part of the IBM WebSphere software platform — a comprehensive set of integrated, award-winning e-business solutions. No matter where you are in the e-business cycle, the WebSphere software platform allows you to grow — at the speed the market demands. Building on this robust platform, you can connect diverse IT environments to maximize your current investments and leverage existing skills. Deliver your core business applications to the Web using industry standards like Java technology and XML. And create next-generation applications that differentiate you from the competition. Advance to a powerful platform for integrated e-business — the WebSphere software platform.

For more information

To learn more about VisualAge Generator, contact your IBM sales representative, IBM Business Partner or visit us at: www.ibm.com/software/ad/visgen/



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