

Liberated Development With Rational XDE Professional

Rational® XDE™ Professional Java™ Platform Edition

Rational XDE Professional: Java Platform Edition, a complete visual design and development environment, can be used alone via the Rational supported Java platform Integrated Development Environment (IDE), based on the Eclipse platform. In addition, Rational XDE Professional can be installed into the IBM® WebSphere™ Studio Application Developer and Integration Edition IDEs.

Rational XDE Professional supports Java developers in building applications, including web-centric solutions. The blend of features (e.g., roundtrip engineering of Java code, automatic or on demand synchronization of code and models, pattern engine support, multi-model support, reverse engineering of database assets into data models, community, and selective process guidance) reduces the effort required to comprehend and develop code and designs.

Rational XDE Professional, a powerful tool for designing, communicating, and documenting throughout the project lifecycle, seamlessly integrates with the development platform used to

create applications and systems. Whether a developer works within a highly structured process and uses durable, long-lived models, or an extreme programmer or modeler using lightweight, disposable models, Rational XDE Professional is flexible, intuitive, and scalable enough to become an indispensable part of how developers work.

Experience Frictionless Design and Development

As an integral and inherent aspect of IBM WebSphere Studio Application Developer or Eclipse environment, Rational XDE Professional allows developers to merge design and development into a seamless, tightly integrated experience. Rational XDE Professional's modeling capabilities are as much a part of the IDE as the code editor and debugger. All developer tools follow the same menus, gestures, and usage metaphors. Rational XDE Professional decreases the learning time while promoting the use of design, code generation, and code synchronization as a daily function.



HIGHLIGHTS

Single design-to-code experience

Automatic or manual code synchronization

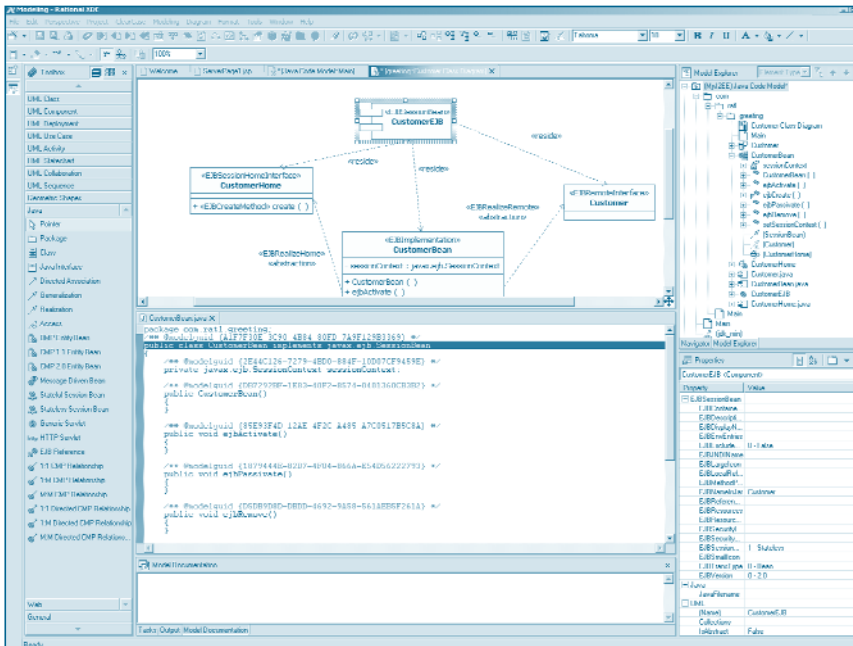
User-definable patterns and code templates to automate repetitive coding tasks

Multiple model support

Free-form diagramming to enhance diagrams with pictures, shapes, and colors

Database modeling and synchronization

Web publishing and report generation



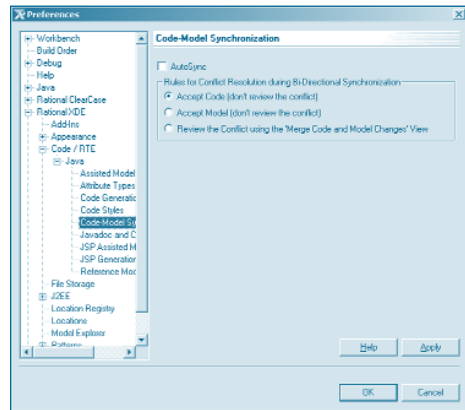
Rational XDE, the complete eXtended Development Environment for Java application development.

Visual Modeling Features

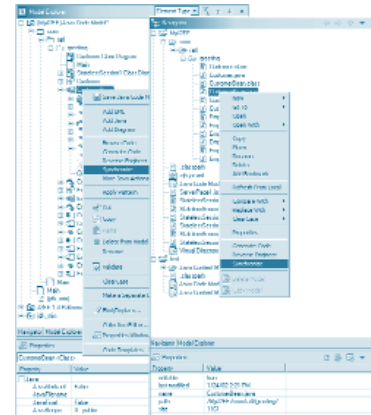
Rational XDE Professional empowers users to create comprehensive, flexible UML models within a world-class integrated development environment. Following are some of Rational XDE Professional's visual modeling features:

- Employ markerless roundtrip engineering with automatic synchronization.
- Create comprehensive models of software architecture with the standard UML diagrams (i.e., Class, Use Case, Activity, Statechart, Sequence, Component, and Deployment).
- Model and leverage design patterns to specify structure and interaction.
- View and manipulate model elements and their containment hierarchy using the Model Explorer. Apply persistent sort order and presentation filters that only reveal elements of interest.
- Implement at one level of abstraction, while viewing the architectural model at a higher level of abstraction.
- View multiple models simultaneously, each representing a different level of abstraction or code project within the same instance of the IDE.
- Partition the representation of software architecture into multiple models. Work with multiple models simultaneously, creating inter-model views and relationships.
- Inspect or modify properties of one or multiple elements using the active selection-based Properties window.

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Rational XDE Professional synchronizes code and model automatically at the desired granularity.



Or use Rational XDE Professional to manually synchronize your code when you want.

Regarding version control tasks, developers can fully utilize features of Rational ClearCase® within the development environment to check-in/check-out code or model artifacts, resulting in faster, more comprehensive, and effortless software development.

Unleash the Power of Patterns

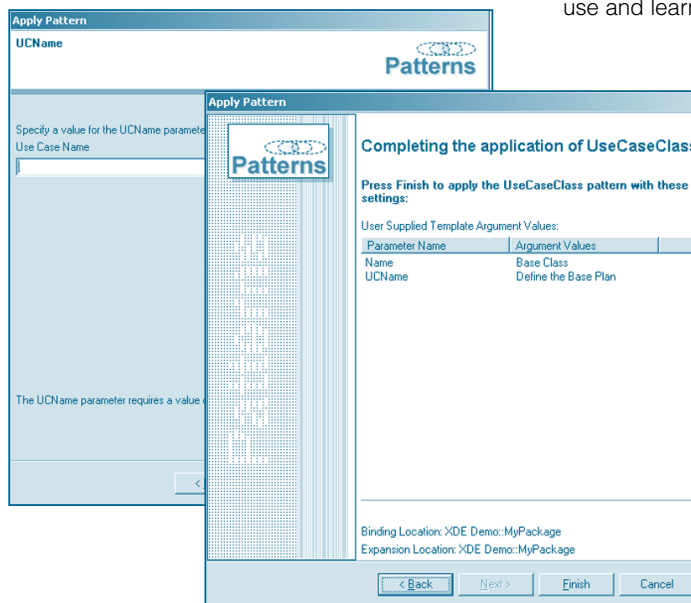
Only Rational XDE Professional allows developers to use its unique patterns engine, code templates, and Rational Developer Accelerators (RDA) to jumpstart early development. These capabilities ensure efficiency and reuse throughout project lifecycle, encouraging code standardization for consistent, reliable project growth.

Rational XDE Professional's revolutionary patterns engine presents developers with an innovative way to reuse software assets from project

to project, developer to developer. Capture design and code in boilerplates and organize them into libraries so they can be reused again in another project. Developers can avoid the inconvenience of rewriting the same code with Rational XDE Professional's code templates, which can be imported directly into any model and included as part of a pattern.

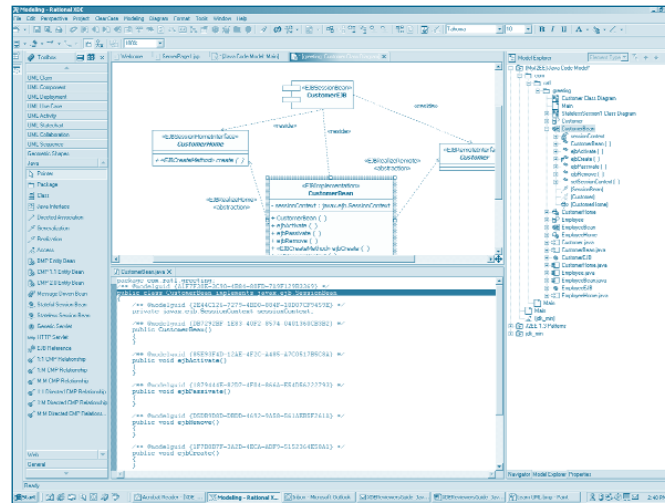
Instant UML

The Unified Modeling Language (UML) is the industry standard for designing, modeling, and documenting development activities. With this common language, communication is more efficient, development time is shorter, complex systems are readily understood, and designs are cleaner and maintainable. Rational XDE Professional can automatically generate UML visualizations of the code that developers can use and learn. The models generated by cod-



Rational XDE Professional uses the Pattern Wizard for the selection and application of patterns.

Learn the Unified Modeling Language as you code.



ing activity can be used to document tasks, understand complex projects through visualization, and harvest patterns from code. Gain more productivity while expanding UML knowledge and design skills.

The Rational Developer Network, an online resource available to all Rational customers, provides access to training and solutions that developers can use to learn, leverage, and "get liberated" at their own pace.

Get More from Models

Rational XDE Professional allows architects and developers to create models and diagrams at any level of abstraction. Utilizing freeform diagramming, architects and developers can enhance diagrams with pictures, shapes, and colors to communicate effectively with stakeholders.

Developers have long struggled with the challenge of maintaining synchronization during the life of a project. Rational XDE Professional's multi-model support features eliminate this significant problem. Developers who struggle to implement within a software architecture can implement at one level of abstraction, while viewing the architectural model at a higher level of abstraction. Further, developers can view multiple models simultaneously, with each model representing a different level of abstraction or code project within the same instance of the IDE. Developers working on large projects are free to break models into smaller ones. This breakthrough technology offers great value to any developer working on projects such as those that involve web service or web applications.

Modeling Databases

Unlike traditional data modeling tools, Rational XDE offers a unique UML-based data modeling tool that brings together data modelers, architects, and developers, i.e., those who need to understand the constructs of databases and how they interact and map with applications.

Data modelers benefit from the ability to easily communicate data models to developers who implement data access methods. In addition, data modelers gain instant access to developers' implementation models, making it easy to review and propose changes on databases.

Web Publishing and Report Generation

Publish models and generate model reports directly to web pages with Rational XDE Professional. Interactively explore published models that contain diagrams as well as details of individual model elements. Rational XDE Professional contains four report templates (i.e., Summary, Summary with Diagrams, Use Case Report, and Class Report). Reports are in HTML and allow users to share views of models with all stakeholders, whether or not they have Rational XDE Professional installed.

Process Guidance for Java Development

Rational XDE Professional guides users through the entire development and implementation process. The Rational Unified Process® (RUP) presents a set of methodologies and a step-by-step development approach using industry best practices. Developers can use the RUP® as a guide to building Web applications. Further, developers can compile a set of use cases, then elaborate and refine them in Rational XDE Professional by using the use case driven approach found in RUP.

Modeling Java and J2EE Applications

Rational XDE Professional offers fully integrated Java roundtrip-engineering capabilities (e.g., code generation, reverse engineering, automatic and manual code synchronization). Following are some of those features:

- Tile the Java-friendly editor with diagram views of models to view model and code simultaneously.
- Synchronize model and code on demand or automatically.
- Access automatic roundtrip engineering to maintain model and code synchronization.
- Use attributes or associations to represent inter-class dependencies; toggle freely between representations.
- Automatically or manually apply patterns to generate default constructors, return bodies, getters and setters.
- Self-document models and code with Javadoc-defined and user-defined tags and values.
- Use standard Java 2 Platform, Enterprise Edition (J2EE) patterns to create EJB Entity Beans, Session Beans, Message Driven Beans, and Servlets.
- Take advantage of assisted modeling to maintain consistency between implementation classes and interface properties.
- Deploy applications to IBM WebSphere, BEA Web Logic Server, and Sun J2EE Server.
- Transform a class directly to an EJB without having to access the pattern.
- Map classes and EJBs to tables and vice versa.

The Rational Unified Process offers guidance on Extreme Programming (XP) via the RUP Plug-In for XP. This Plug-In feature enables developers to write code better and faster by providing workflows, guidelines, and other resources that offer lightweight best practices designed expressly for developers' needs.

Integrated Use Case Management

Through its integration with Rational RequisitePro, Rational's solution for Requirements Management, Rational XDE Professional users can establish and maintain bi-directional links between use cases in Rational XDE Professional and the corresponding descriptions of the use cases in RequisitePro. This capability extends use cases in Rational XDE Professional with detailed requirements information.

Managing use cases in conjunction with other requirements ensures better management of software development project scope, verification of business needs coverage, and control over changes. Thus, integrated use case management ensures implementation of the functionality agreed upon with customers and that this functionality appropriately evolves as business drivers change.

Configuration Management

Rational XDE Professional performs in conjunction with supported configuration management software to provide source control and versioning branch and merge capabilities. Users can divide models into multiple files to simplify working with large models, as well as facilitate working with teams and configuration management systems. On-demand storage unit loading allows users access to model elements without concern as to whether they are currently loaded; the unit simply loads automatically when users access an element that requires it.

Users can set preferences to automatically check-out files on demand when editing these files, or to automatically add newly created storage units to configuration management systems. Using Rational XDE Professional's Compare and Merge capability, users can view the differences and/or conflicts between model or storage unit files, manually or automatically resolve conflicts, and merge files to produce a single output model. This function becomes vital when team development workflows results in one person working simultaneously on the same controlled units.

Rational Developer Network

The Rational Developer Network, an online resource available to all Rational customers, provides access to training and solutions that developers can use to learn, leverage, and "get liberated" at their own pace. The Java Knowledge Center includes a variety of content and discussion forums tailored exclusively to the worldwide community developing applications using Java and Rational tools and best practices.

Accelerate Success with Rational Services

Like all Rational tools, Rational XDE Professional is supported by an extensive, worldwide service network. Explore more than a thousand articles, white papers, courses, and artifacts online at the Rational Developer NetworkSM. Build team capability through expert consulting and technical support services. Take advantage of more than 60 courses available at the Rational University to accelerate technology deployment and project delivery. Available where and when needed, Rational Services improve self-reliance while building a foundation for continuous improvement of software development.

SPECIFICATIONS

Hardware and Software Requirements

Operating System

- Windows NT 4.0 Workstation, Service Pack 6a
- Windows 2000 Professional, Service Pack 2 or Service Pack 3 (Recommend: Service Pack 2)
- Windows 2000 Server and Advanced Server, Service Pack 2
- Windows XP Professional

Supported IDEs

- Rational XDE Eclipsed-based Java platform IDE
- IBM Websphere Studio Application Developer 4.0.3
- IBM Websphere Studio Application Developer Integration Edition 4.1.1

Processor

- 450 MHz PII
- Recommend: 700 MHz PIII or faster

Available RAM

- 256 MB minimum
- Recommend: 512 MB

Available Disk Space

- 400 MB installation directory
- 50 MB workspace
- Recommend: 2-4 GB

Configuration Management

Supports ClearCase 4.2, ClearCase 2002.05.00, ClearCase LT 2001A.04.00, ClearCase LT 2002.05.00.

EJB and Web Modeling and Deployment Platforms

- BEA WebLogic 5.1, 6.1
- IBM WebSphere 4.0
- Sun J2EE Reference Implementation 1.3
- Web Server (Apache) 1.3

Rational Software

Dual Headquarters

18880 Homestead Road
Cupertino, CA 95014

20 Maguire Road
Lexington, MA 02421

Toll-free: (800) 728-1212
e-mail: info@rational.com
Web: www.rational.com

International Locations:
www.rational.com/worldwide