

# Rational XDE Professional .NET Edition

Rational XDE Professional is an extended development environment providing visual design and development capabilities. Its unique, unprecedented level of support for Microsoft® Visual Studio™ .NET allows users to work in a single environment, avoiding the need to switch between many different, nonintegrated tools.

Rational XDE Professional supports the Visual Studio .NET developer in building applications, including web-centric solutions. The combination of features such as round trip engineering of Visual C#™ .NET, Visual Basic® .NET and ASP.NET, automatic or on demand synchronization of code and models, pattern engine support, assisted modeling, multi-model support, reverse engineering of database assets into data models, community, and selective process guidance reduce the effort required to understand and develop their code and designs.

Rational XDE Professional is a powerful tool for designing, communicating, and documenting throughout the software development lifecycle. It is seamlessly integrated with the development platform you use to develop your applications and systems. Whether you work within highly structured processes and require durable, long-lived models, or you are an extreme program-

mer and modeler using lightweight, disposable models, this is the tool that is flexible, intuitive and scalable enough to become an indispensable part of what you do.

## Experience Frictionless Design and Development

Combine your design and development into a seamless, tightly integrated experience. Rational XDE Professional becomes an integral and native capability of Microsoft Visual Studio .NET. Enjoy true integrated design and development – modeling is as much a part of Visual Studio .NET as the code editor and debugger. All your tools follow the same menus, gestures, and usage metaphors. This reduces the learning curve and promotes the use of design, code generation and code synchronization as a daily function.

And for version control tasks, you can fully utilize Microsoft Visual SourceSafe™, or the features of Rational ClearCase® within your environment as well — checking in and out your code or model artifacts. The result is easier, faster, more comprehensive development in your own work environment.



## HIGHLIGHTS

Single design-to-code experience

Visual Basic .NET and Visual C# .NET language support

ASP.NET Support

Manual or automatic code synchronization

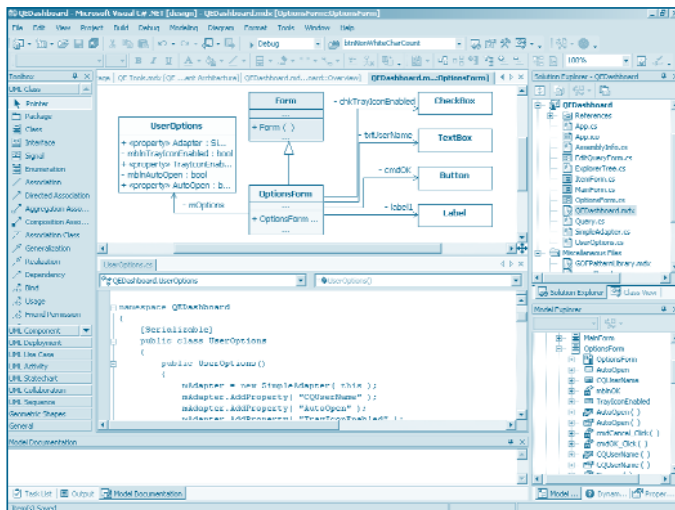
User definable patterns and code templates to automate repetitive coding tasks

Multiple model support

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

Database modeling and database synchronization

Generate reports and publish to the web



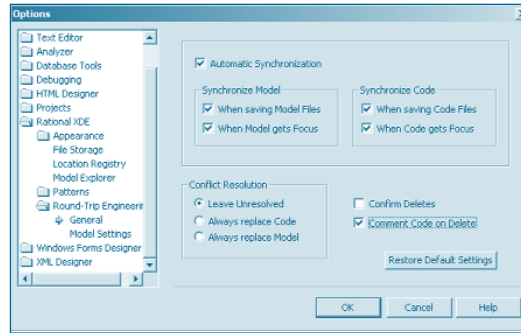
*Rational XDE, the complete eXtended Development Environment for Visual Studio .NET application development.*

## Visual Modeling Features

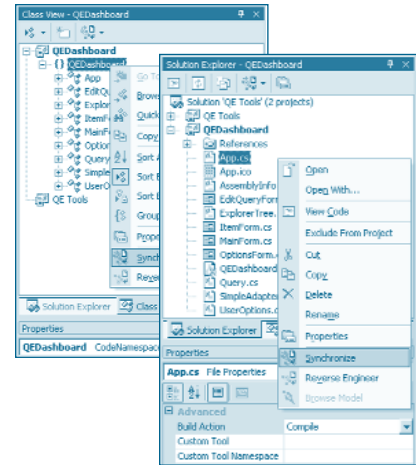
Rational XDE empowers you to create comprehensive, flexible UML models from within a world-class integrated development environment.

- Markerless roundtrip engineering with automatic synchronization.
- Create comprehensive models of your software architecture and design with the standard UML diagrams: Class, Use Case, Activity, Statechart, Sequence, Component, and Deployment.
- Model and leverage design patterns to specify structure and interactions.
- View and manipulate model elements and their containment hierarchy using the Model Explorer. Apply persistent sort order and presentation filters that allow you to show only the 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 Visual Studio .NET.
- Partition the representation of your architecture into multiple models. Work with multiple models simultaneously, creating inter-model views and relationships.
- Easily inspect or modify the properties of one or multiple elements using the active selection-based Visual Studio .NET Properties window.

## Liberated Development with Rational XDE Professional



*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.*

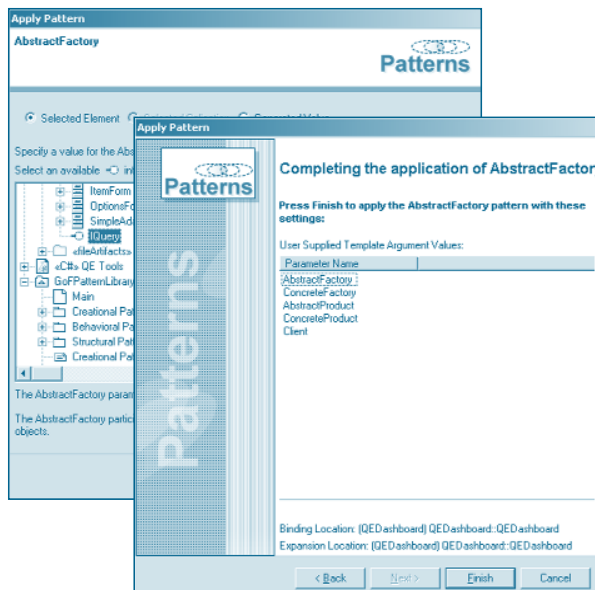
## Unleash the Power of Patterns

Only Rational XDE Professional allows developers to use its unique patterns engine, code templates and Rational Developer Accelerators (RDA) to jump-start early development. This ensures efficiency and reuse throughout the lifecycle, encourage code standardization for more consistent, reliable project growth.

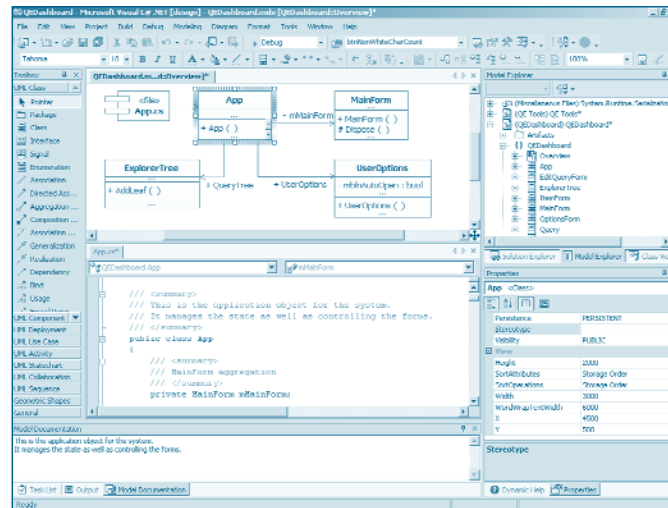
Rational XDE Professional's revolutionary pattern engine gives you a new way to reuse your software assets from project to project and developer to developer. Capture your design and code in patterns and organize them in libraries so you can apply them anywhere. Avoid the hassle of rewriting the same code with code templates, which can be imported directly into any of your models and included as part of your patterns.

## Instant UML

The Unified Modeling Language (UML) is the industry standard for designing, modeling and documenting development activities. With this common language, communication is better, development time is shorter, complex systems are more easily understood, and designs are cleaner and more maintainable. Rational XDE Professional can generate the UML representation of the code that developers can use and learn, automatically. The models generated from your coding activity can be used for documenting your tasks, understanding complex projects through visualization, and harvesting your work for future use via Rational XDE Professional's pattern engine support. Gain more productivity while expanding your UML knowledge and design skills.



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



*Learn the Unified Modeling Language as you code.*

### Assisted Modeling for Visual Studio .NET Developers

Designing applications can be very complex and therefore very difficult and time consuming. The Unified Modeling Language (UML) can help reduce that complexity with its power of visualization. To help developers become proficient with the UML, Rational Software has added industry-first automation for the visual design and development of Visual C# .NET, Visual Basic .NET and ASP.NET applications inside Visual Studio .NET.

Assisted modeling allows developers to model their application using the vocabulary of their programming language. This enables developers to design and visualize their application without being experts in the UML. It's a powerful way for novice UML modelers to create precise UML models, learning as they go. Assisted modeling technology uniquely eliminates the need for developers to stop to take time out to learn the UML.

### Get More from Models

Architects and developers have long struggled with the challenge of staying in sync throughout the project. Rational XDE Professional allows architects and developers to create models and diagrams at any level of abstraction.

Utilizing free-form diagramming, you can enhance your diagrams with pictures, shapes, and colors to effectively communicate with all stakeholders.

Rational XDE Professional's multimodel support eliminates this significant problem. Developers that struggle to implement within an architecture are able to implement at one level of abstraction, while viewing the architectural model at a higher level of abstraction. Further, you can view

multiple models simultaneously, each representing a different level of abstraction or code project within the same instance of Visual Studio .NET. Developers working on large projects are free to break their models into smaller ones. This breakthrough combination of capabilities offers immense value to any developer working on projects such as web service or web-based applications.

### Modeling Visual Studio .NET Applications

Rational XDE Professional enables architects, designers, and developers to harness the power of the .NET framework. It provides complete modeling and round-trip engineering support for WinForm, WebForm and Web Service applications developed with Visual Basic .NET, Visual C# .NET, and ASP.NET.

Rational XDE Professional provides fully integrated code synchronization capabilities that can be performed automatically or manually with one-click controls in the Solution Explorer, as well as the Rational XDE Professional Model Explorer and diagrams.

### Modeling Databases

Unlike traditional data modeling tools, Rational XDE is a unique UML-based data modeling tool that brings together data modelers, architects and developers. In short, anyone who needs to understand the constructs of the databases and how they interact with, and map to, the application.

A data modeler benefits from the ability to easily communicate the data model to the developer who will implement the data access methods. And, the data modeler gets instant access to the developer's implementation model, making it easy to review and propose changes.

## Modeling Visual Basic .NET and Visual C# Applications

- Modeling Visual Basic .NET and Visual C# .NET Applications
- Automatic or on-demand synchronization between code and model
- Pre-built Visual Studio .NET framework models
- Work on code and diagrams at the same time with split-view windows
- Model applications using language terms and concepts with assisted modeling

## Web Publishing and Reporting

Publish models and generate model reports directly to web pages. Published models can be explored interactively, and can contain diagrams as well as details of individual model elements. In addition, Rational XDE has four report templates (Summary, Summary with Diagrams, Use Case report, and Class report).

Reports are in HTML, allowing you to share views of your model with all stakeholders, whether or not they have Rational XDE.

## Configuration Management

Rational XDE Professional works in conjunction with supported configuration management software to provide source control, and versioning branch and merge capabilities. You can divide models into multiple files to make it easier to work with large models, as well as to facilitate working with teams and configuration management systems. On-demand storage unit loading lets you access model elements without worrying whether or not they are currently loaded; the unit simply loads automatically when you access an element that requires it.

## Integrated Use Case Management

To ensure optimal design, you need access to project requirements from where you sit. Through its integration with Rational RequisitePro®, Rational's solution for Requirements Management, Rational XDE users can establish and maintain bi-directional links between use cases in Rational XDE and the corresponding descriptions of the use cases in RequisitePro. This extends use cases in Rational XDE with detailed requirements information.

Managing use cases in conjunction with other requirements ensures the scope of software development projects is better managed, change is controlled and business needs coverage is verified. In short, integrated use case management helps ensure you implement the functionality agreed upon with your customers, and that this functionality appropriately evolves as the business drivers change.

## Process Guidance for .NET Development

Rational XDE Professional provides guidance to help you through the entire development and implementation process. The Rational Unified Process® (RUP) provides a set of methodologies and a step-by-step development approach using industry best practices. Using the use case driven approach found in RUP, you can compile a set of use cases, and then elaborate and refine them in Rational XDE Professional.

In addition, there is Rational Unified Process guidance for Extreme Programming (XP) through the RUP® Plug-In for XP. This Plug-In enables developers to write better code faster by providing workflows, guidelines and other resources that offer lightweight best practices designed specifically for their needs.

## Rational Developer Network

As an additional online resource, Rational Developer Network, available to all Rational's customers, allows you to access training, solutions, and expertise, anytime. You can learn, leverage and get liberated on your own schedule – not someone else's. The site includes a variety of content and discussion forums residing in the .NET Knowledge Center tailored exclusively for the worldwide community developing applications using .NET 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 organization. Explore more than a thousand articles, white papers, courses, and artifacts online at the Rational Developer Network<sup>sm</sup>. Build your team's capability through expert consulting and technical support services. And take advantage of more than 60 courses available from Rational University to speed technology deployment and accelerate your project's delivery. Available where and when needed, Rational Services improve self-sufficiency as they build a foundation for continuous software development improvement.

## 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 (Service Pack 2 is recommended)
- Windows 2000 Server and Advanced Server, Service Pack 2
- Windows XP Professional

#### Processor

- Minimum: 450 MHz PII
- Recommended: 700 MHz PIII or faster

#### Available RAM

- Minimum: 256 MB
- Recommended: 512 MB or more

#### Available Disk Space

- Minimum: 400 MB for installation directory; 50 MB for workspace
- Recommended: 2-4 GB for workspace

#### Microsoft Visual Studio .NET

- You must properly install Visual Studio .NET with .NET Framework Service Pack 1 before installing Rational XDE. If you have not yet done so, please refer to the specific platform requirements for Visual Studio .NET, which are available from the Microsoft Corporation.

#### Configuration Management

- Supports ClearCase 4.2, ClearCase 2002.05.00, ClearCase LT 2001A.04.00, ClearCase LT 2002.05.00, Microsoft Visual SourceSafe 6.0c. Supports the SCC interface.

#### Rational Software

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