

The Logical Choice for Ada development

Rational Apex Ada

Rational Apex is the development environment of choice for Ada and mixed language applications running on UNIX and Windows NT. It is a single, scalable tool that integrates design, implementation, testing, and process management for even the largest application development teams.

Rational Apex is the industry's only uniform solution for creating and deploying multi-platform UNIX and Windows NT Ada applications. In a heterogeneous environment, it automatically and transparently selects the correct machine for compiling, linking, debugging, testing and executing programs. It helps developers maintain the same code across different architectures by providing a consistent graphical user interface compiler and debugger across the major UNIX systems (Solaris, HP-UX, Compaq Alpha, AIX, IRIX) and Windows NT.

Architecture Enforcement

Rational Apex provides a framework for defining architectural components, known as Rational Subsystems. A Rational Subsystem provides structured storage for a closely coupled set of source files as well as a mechanism to formally define the interface to those source files.

Rational Apex prevents undesirable code references by controlling visibility among Rational Subsystems. Attempts to improperly reference units result in compile time error messages. In this way, subsystems enable users to automatically express and enforce the large-scale structure, or architecture, of their applications.

Visual Modeling

Rational Apex integrates with award-winning Rational Rose® to provide visual modeling of system design and architecture, customizable code generation, forward and reverse engineering, model differencing, and design updating features available nowhere else.

Reverse engineering allows developers to track changes made throughout the process. The result is dynamic documentation of the actual system built, rather than a static expression of an early design concept. Together, Rational Rose and Rational Apex offer the only tightly integrated tool suite that supports the entire process of designing, creating, and deploying architectural components across multiple platforms.

Faster Edit, Compile, Debug Cycles

The Rational Apex Ada editor provides integrated, intuitive browsing based on semantic information generated by the compiler. It shows the point of definition for variables and types, as well as all places a variable or type are used. This capability comes not from error-prone syntactic analysis, but from the semantic analysis only a compiler can provide.

The mature production-quality Ada compiler provides features that substantially reduce the time spent building large applications. Smart recompilation limits recompiles to only those units actually affected by a modification of a unit specification; simple changes like adding comments or adding a variable or type do not require recompilation of all dependents. When recompilation is required, incremental compilation makes use of previously compiled information to minimize the time required to recompile the unit.

Together, these techniques can reduce compilation time by an impressive factor of 10 or more for large systems.

The Advanced Debugger enables debugging of in-line code and optimized code, the same code that will be fielded in the application. No special compile is needed for debugging. All application code is immediately debuggable. The intuitive GUI interface provides graphical setting of breakpoints, navigation of source code, and debugging of machine code when desired.

HIGHLIGHTS

Comprehensive Ada 95, Ada 83 and UNIX C/C++ development environment integrating editors, optimizing compilers, multilingual debugger, configuration management, powerful browsing capabilities, visual modeling, and process automation tools

Supports all major UNIX platforms plus Windows NT with host-consistent user interfaces and uniform compilers and debuggers

Cross-development for all major embedded target processors

Team-based software development tools across the software development lifecycle for even the largest applications

Integrated with a mature production quality C/C++ compiler for developing mixed language applications

Integrated with Rational TestMate® for standardized test generation and management

Integrated with Rational Rose®/Ada and Rose/UNIX for visual modeling of complex systems, generation of source code and analysis of existing source code using industry-standard UML Notation

Integrated with Rational SoDA® for automated document generation

Provides POSIX-compliant interfaces

Integrated with Rational ClearQuest for defect tracking and change management

Complete Integration

Rational Apex provides full lifecycle automation for Ada developers and project managers through its tight integration with other Rational products:

- Rational Apex Duo provides seamless support for C/C++ and Ada 95/Ada 83 development, offering unmatched support for development of mixed-language applications.
- Rational Rose provides visual modeling of system design and architecture.
- Rational TestMate provides test generation, tracking and management; automated stub generation, test-case generation and test-data generation to speed unit and subsystem testing prior to integration, and code-coverage analysis and MCDC analysis to identify areas needing additional testing.
- Rational ClearCase® supports configuration management and version control for parallel development, so multiple developers or teams can work from the same baselined code, whether as local or geographically distributed teams.

- Rational SoDA provides automated document generation for internal documents, such as requirements and design, and external documents, such as user manuals. Tight integration with Rational Rose and TestMate permits automatic inclusion of visual models, version information and test results.
- Rational ClearQuest® offers defect tracking and change management for any type of project on any platform, including UNIX, Windows and the web.

Rational Apex also provides tight integration with third party products:

- AXI from Applied Technology Corporation for X- windows bindings
- Ada Analyzer from Little Tree for Ada source code analysis
- ORBexpress from Objective Interface for development of CORBA-compliant object brokering applications

See individual datasheets for more information.

SPECIFICATIONS

Language Platforms

Languages

- Ada 83
- Ada 95
- C/C++

Platforms

- Sun Solaris
- Compaq Alpha Tru-64
- HP HP-UX
- IBM AIX
- SGI IRIX
- Windows NT

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