

Borland C++Builder

Questions & Answers

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C++BUILDER QUESTIONS AND ANSWERS

Borland C++Builder Product Information

1. Product Description

Q. What is Borland C++Builder?

A. Speed, productivity and power for C++ developers. Borland C++Builder gives you the speed of visual development — the ability to drop a component on a form, define its properties and behavior, and to rapidly build your application's user interface. C++Builder gives you the productivity of reusable components — over 100 components that fully encapsulate the Windows95 common controls with complete extensibility including full support for ActiveX components. Borland C++Builder gives you the unlimited power of C++ — fast, reliable, safe compiler optimizations, incremental linking, CPU View and command-line tools — all the features you expect from a professional C++ development environment.

Q. Where does C++Builder fit in the Borland family of tools?

A. Each Borland product has its own distinguishing area of focus. C++Builder's special strength is that it provides all the productivity of a rapid application development environment *and* let's you program in industry-standard C++ — from prototype to production.

Borland's family of tools are extremely complementary and highly interoperable because they all share common core characteristics. These include object-oriented technology to support code reuse and simplify maintenance, leading-edge visual tools to provide true rapid application development (RAD), high performance compiler technology for extremely tight, fast executables, and scalable database connectivity to ensure reliable, efficient sharing of your data and objects across the enterprise. C++Builder delivers these Borland advantages.

Q. When will there be a new version of Borland C++?

A. An update to Borland C++ will be released shortly after the release of Borland C++Builder which will significantly enhance interoperability between the two tools.

Borland C++ 5.0 and Borland C++Builder already share support for the latest C++ language features and similar or identical implementation of many features including CPU view and command-line tools. Both Borland C++ 5.0 and C++Builder integrate full development cycle support with industry-standard tools including InstallShield and PVCS.

The Borland C++ update will deliver a common compiler and incremental linker, complementary project file support, and complete technical documentation and examples on code sharing and reuse.

Input about the future development of our products is welcomed and is essential to allow us to meet our commitment to continue to radically improve the productivity of C++ developers.

Q. Understanding C++Builder and Delphi97.

A. C++Builder and Delphi are independent products. Each provides unique, though complementary benefits. Delphi is easy to learn and easy to use and delivers high-productivity, Client/Server, multi-tier development. C++Builder also delivers high-productivity Client/Server development and provides the power and control of industry-standard C++. The two products provide unprecedented interoperability, allowing C++ and Delphi programmers to easily share objects.

Additional information about the feature set of Delphi97 will be presented in the coming weeks so that you can make an informed decision about what functionality you need and when you need it. The initial, very extensive features of C++Builder have been carefully selected within the context of our primary objectives: quality and timely availability.

2. Product Line Alternatives

Q. Why four product alternatives?

A. By providing four different product alternatives we are better able to meet the needs of a broad range of developers. The features found in these configurations reflect the differing needs of C++ developers.

- Learn To Program with C++Builder provides the easiest way for beginners to learn C++ programming.
- C++Builder Standard delivers true visual development to individual C++ developers and other developers who want to put the power of C++ to work.
- C++Builder Professional includes additional features important to professional programmers such as enhanced database power and connectivity, expanded documentation, and complete Visual Component Library (VCL) source code.
- C++Builder Client/Server Suite adds a complete development suite for corporate professionals developing Client/Server applications including native SQL drivers, SQL Monitor, SQL Explorer, Data Migration Wizard, and a full set of companion products to support team development and application deployment.

Q. How do C++Builder Standard, Professional, and Client Server Suite differ?

A. The following table notes feature/functionality differences between the product alternatives:

Borland C++Builder Features	Std	Pro	C/S Suite
Industry-standard C++ language	4	4	4

High-performance, 32-bit optimizing native-code compiler	4	4	4
Incremental linker for incredibly fast builds	4	4	4
Professional IDE, with fully integrated Debugger, Editor, and Project Manager	4	4	4
Borland Visual Two-Way Tools Form Designer, Object Inspector, and more	4	4	4
Create reusable DLLs, LIBs, and standalone EXEs	4	4	4
Complete suite of Windows 95 common controls	4	4	4
Complete access to Windows 95/Windows NT APIs	4	4	4
Build OLE Automation controllers and servers	4	4	4
Object Repository for reusing forms, Data Modules, and DLLs	4	4	4
Visual Form Inheritance to reduce coding and simplify maintenance	4	4	4
Visual Component Library (VCL) with more than 100 reusable components	4	4	4
Component Wizard to easily build and customize components	4	4	4
Database Form Wizard for point-and-click data-centric form design	4	4	4
Data-aware components, including DBGrid and Rich Text	4	4	4
Data Module Objects to separate business rules and application code	4	4	4
Database Explorer to browse and modify tables, aliases, and indexes	4	4	4
QuickReports for creating, previewing, and printing embedded reports	4	4	4
Extensive online help	4	4	4
VCL Source Code and manual to develop and customize components		4	4
Scalable Data Dictionary to implement and maintain data integrity		4	4
Complete ODBC connectivity		4	4
Advanced data-aware components, including Multi-Object Grid		4	4
32-bit Local InterBase for off-line scalable SQL development		4	4
CPU View and extensive command line tools		4	4
Comprehensive printed documentation		4	4
InstallShield Express for building professional installs		4	4
Internet Solutions Pack to easily create Web-enabled applications		4	4
WinSight 32 for monitoring Windows messaging		4	4
Open Tools API to integrate your favorite tools		4	4
Full ActiveX support including sample charts, spreadsheets, and more		4	4
SQL Links native drivers for Oracle, Sybase, MS SQL Server, DB2, Informix, and InterBase with unlimited deployment			4
SQL Explorer for visually managing server-specific meta data including stored procedures and triggers			4
SQL Monitor to test, debug, and tune your SQL applications for maximum performance			4
Visual Query Builder to build bug-free ANSI SQL-92 commands			4
Cached Updates for optimum server responsiveness			4
Data Migration Wizard to scale networked applications and move data between formats and host platforms			4
InterBase Win95/NT (4-user license) for developing and testing your SQL applications			4
Integrated PVCS Version Manager to manage complex team projects			4

- Q. What is the Learn To Program with Borland C++Builder product?
- A. Learn To Program with Borland C++Builder is the easiest way to learn C++ programming for Windows. It provides the beginning programmer with the simplest, fastest, most inexpensive access to Borland C++Builder's visual development tools and awesome C++ compiler technology. Tailored to meet the needs of programmers new to C++ as well as students, and hobbyists, Learn To Program with Borland C++Builder comes with a special "Teach Yourself Borland C++Builder in 14 Days" book and tutorial. This version of C++Builder is intended as a learning tool and though it builds fully functional C++ applications, the applications are not deployable – executables compiled by the Learn To Program version of C++Builder are built to run only when the Learn To Program with C++Builder integrated development environment (IDE) is also running.

3. Pricing and Availability

- Q. What price alternatives will I have?
- A. The following table lists prices for the four C++Builder product packages:

Product Version	Special Upgrade	New User
Learn To Program with Borland C++Builder	\$49.95	\$49.95
Borland C++Builder Standard	\$99.95	\$99.95
Borland C++Builder Professional	\$299.95	\$799.95
Borland C++Builder Client/Server Suite	\$1699.00	\$1999.00

- Q. Am I eligible for special upgrade pricing?
- A. Owners of Borland C++ and Delphi, Microsoft Visual C++ and Visual Basic, Optima ++, PowerBuilder, and Symantec C++ products will receive the special competitive upgrade pricing noted above on the C++Builder Professional edition. Owners of Delphi Developer and Client/Server Suite, Borland C++ Development Suite and Borland C++ Development Suite with Design Tools, or Borland C++Builder Professional edition will receive the special upgrade pricing noted above on the C++Builder Client/Server Suite.

Borland C++ and Delphi owners will receive the special additional value of two important technical manuals: *The Borland C++Builder Library Reference*, and the *Standard C++Library User's Guide & Reference* – a \$49.95 value when purchased separately from our order desk (800.331.0877).

- Q. When can I buy C++Builder?
- A. C++Builder will be available in the first calendar quarter of this year. Please subscribe to our Listserv device so that as more detailed information becomes available how you can order Borland C++Builder, we can provide it to you. To subscribe, please visit our web site, www.borland.com, where a simple subscription form is provided for your convenience.

4. System Requirements

- Q. What kind of system do I need to use C++Builder?
- A. The system requirements for all editions of C++Builder are:

- 486-based PC or higher
- Microsoft Windows 95 or NT 3.51 or 4.0
- Minimum system memory 16 Mb (24 Mb recommended)
- VGA or higher resolution monitor
- Mouse or other Windows pointing device.

Approximate hard disk space required (may vary due to cluster size):

Learn To Program: 75Mb
Standard: 75 Mb
Professional: 100 Mb
Client/Server Suite: 130 Mb

5. Additional information

- Q. Where can I get more information about Borland C++Builder?
- A. Extensive technical documentation and other materials are available on our web site, www.borland.com.
- Q. Where can I get a copy of Borland C++Builder to test drive?
- A. Our web site will continue to offer our downloadable preview edition of Borland C++Builder.
- Q. Where can I get help with Borland C++Builder when I'm trying it out?
- A. We provide a web-based threaded discussion forum on our web site. Anyone and everyone is welcome to participate. Please note that we do not provide support for preview editions (pre-release versions) of our software. This C++Builder web forum is provided to allow developers working with preview editions of C++Builder to discuss the product and assist each other. We encourage you to take advantage of this resource.
- Q. Where can I report bugs I encounter in the preview edition?
- A. Our web site supports rapid reporting of any problems you identify - all information you can provide will be greatly appreciated. Please visit www.borland.com for more information!

Borland C++Builder Features and Benefits

1. C++ Power

- Q. What professional quality C++ tools does C++Builder provide?
- A. C++Builder's optimizing 32-bit native code compiler is built upon Borland's proven C++ compiler technology - compiler technology that ensures extremely safe, reliable, and fast optimizations, for tight, fast executables. Borland's incremental linker makes links faster and EXEs smaller with extreme safety and reliability. Automatically eliminate linking of unmodified source files and unused functions for the fastest possible builds and the most efficient use of your time. C++Builder's powerful CPU View consists of five separate panes that give you a view into a specific low-level aspect of your running application. And C++Builder supports all the command-line tools expected from a professional development environment. You can access many of the tools C++Builder includes to help you create C++ programs (also accessible from within the IDE), or exercise detailed control of the compilation and linking of your program files.
- Q. Can I use my existing C++ code with C++Builder?
- A. Yes. Borland C++Builder compiles all ANSI/ISO code and supports all the latest ANSI/ISO language features. Everything you know and all the code you've written can easily be used within C++Builder.
- Q. Does C++Builder provide full support for the latest ANSI C++ language features?
- A. Yes, Borland C++Builder compiles any ANSI C++ code including the latest ANSI features: Templates, Exceptions, Runtime Type Information (RTTI), and Namespaces. Simplify

development with the Standard C++ Library with features like: string, complex, and numeric limits classes, and includes the Standard Template Library (STL) consisting of container and iterator classes. Plus, get new ANSI/ISO C++ features like bool, explicit, mutable, and typename.

Q. What Windows 95 and NT support can I expect?

A. C++Builder includes a complete suite of Windows 95 controls: Tree Views, Trackbars, sliders, progress bars, Toolbars, Rich Edit, List Views, Image Lists header and status bar controls, and more. In addition, C++Builder includes full 32-bit support for long file names, multi-threading, and the Win95 API. And C++Builder allows programmers total power to exploit all of the enhancements of Windows 95 by supporting direct calls to any Windows 95 or NT API.

Q. Does C++Builder support ActiveX components?

A. C++Builder's proven object-oriented architecture means that the integration of ActiveX/OCX controls is seamless. Choose from the vast selection of existing third party components from a world-wide component development community. Use, customize, or subclass ActiveX components as needed—all from within C++Builder. Additionally, C++Builder can create high-performance OLE automation controllers and servers; C++Builder allows developers to create partitioned applications easily with Network OLE. C++Builder fully supports in-process and out-of-process local OLE automation servers.

2. The Speed of Visual Development

Q. What visual rapid application development (RAD) tools does C++Builder provide?

A. C++Builder's integrated development environment provides a Visual Form Designer, Object Inspector, Component Palette, Project Manager, and fully integrated Editor and Debugger to give developers true rapid application development with complete control over their code and resources.

Q. What makes C++Builder a *Real Visual Development* environment?

A. Create applications by simply dragging a component from the Visual Component Palette onto the Form Designer and setting its properties in the Object Inspector. Event handlers are automatically created as needed.

And Borland C++Builder places no barriers between you and your code. With Borland Two-Way Tools, C++Builder lets you maintain control of your code by providing a seamless integration between the visual designers and the code editor. You have the flexibility to use the code editor or the visual designers interchangeably and know that the two are always synchronized.

Plus C++Builder gives you "Live" data—for prototyping and testing—as you visually program the database portion of your application. No need to write a test harness or leave the visual programming environment—you see what the user will see!

3. The Productivity of Reusable Components

Q. How is a component library different from a class library?

A. Traditionally, a class definition of a C++ class contains data members which holds data of interest to the object, and methods which define the behavior of the object. This concept applies to other object-oriented languages too, including Smalltalk and Java. Subclassing is used to add new behaviors. With the Borland Visual Component Library, the same concept applies. Each object contains data members and methods, and the programmer can still use methods to manipulate the object.

Borland's VCL builds on the class library structure with the concept of component properties, and events. Each component consists of common elements that allow developers to manipulate its appearance and function via properties and events in addition to methods. These features make true visual development possible, promote code reuse, and greatly simplify application maintenance.

- Q. What benefits does the Borland Visual Component Library (VCL) provide?
- A. C++Builder's award-winning Visual Component Library is an industry-standard component library with over 500,000 users today. The VCL includes over 100 reusable components that fully encapsulate the Windows 95 user interface elements and provides tabbed notebooks, data grids, and multimedia tools to help you build sophisticated applications fast. Use, customize, or subclass components to fit your development needs, all from within the C++Builder environment. C++Builder lets you exploit the power of object-oriented programming and leverage development resources to efficiently create robust applications.
- Q. What else in C++Builder is reusable? Everything?
- A. Yes! C++Builder introduces a next generation methodology for storing and reusing data models, business rules, objects, and forms. A centralized object repository of form designs links into a reusable database architecture. Combining the flexibility of Borland's Database Engine with a repository of reusable tools gives developers unprecedented responsiveness to application demands. Because building on an existing foundation reduces development time, C++Builder's Object Repository stores forms and complete applications for reuse. Any new application can inherit, reference, or simply copy an existing structure—you pick the architecture that best fits your development needs.

4. Database Tools and Client/Server Connectivity

- Q. How easily can I connect to major databases with C++Builder?
- A. C++Builder makes powerful database programming as simple as drag and drop. C++Builder uses the data dictionary to automatically customize the display and edit properties of your data. You select the fields and C++Builder instantly builds all the connections for a live database application.

C++Builder is built on the new 32-bit Borland Database Engine. This flexible database engine provides connectivity to PC databases including dBASE and Paradox, with complete ODBC connectivity to all popular databases including Access and FoxPro – *and* all this powerful data connectivity scales smoothly to client/server. With features like a new Query Engine, BCD support for financial applications, low-level API support, and improved dBASE integration, BDE forms a solid foundation for all your database applications. The database engine is tightly linked into C++Builder's reusable database repository and Data Module architecture.

C++Builder Client/Server Suite delivers high-performance 32-bit SQL Link native drivers for Oracle, Sybase, MS SQL Server, DB2, Informix, and InterBase, including an unlimited deployment license for all drivers.

- Q. Can Borland C++Builder be used for mission-critical client/server application development?
- A. Absolutely. The Borland C++Builder Client/Server Suite delivers a comprehensive tool set for client/server development. Tune server query performance with SQL Monitor. Visually construct complex SQL statements with the Visual Query Builder. Manage and create stored procedures, triggers, and business rules within the SQL Explorer. Prototype with Local InterBase. Test and deploy with the complete 4 user InterBase Server for Windows 95 and NT. Borland C++Builder Client/Server Suite provides the most comprehensive, most productive client/server development environment for C++ programmers!

- Q. What is the InterBase Server? What is Local InterBase?
- A. InterBase is Borland's high-performance cross-platform SQL Server. Some of the new features InterBase 4.2 provides include:
- Optimized thread-safe client and multi-threaded server
 - Dramatic performance enhancements for large multi-user systems
 - 32-bit GUI tools for interactive SQL, server management, and license management
 - 32-bit ODBC drivers for Windows 95 and Windows NT
 - License manager Wizard to facilitate user license management
 - Identical code base and feature set across Windows 95 and Windows NT platforms
 - Certified and optimized for Microsoft NT 4.0

InterBase is available on over 15 operating systems, including: Windows 3.1, Windows 95, Windows NT, NetWare, SCO, Sun OS, Sun Solaris, HP-UX, IBM AIX, SGI IRIX, and many other Unix platforms.

A single-user version of InterBase Server is included in C++Builder Professional and C++Builder Client/Server Suite. Local InterBase provides C++Builder developers with their own ANSI 92 SQL conformant server for prototyping and development of true client/server applications. Local InterBase has all of the same functionality as the multi-user versions of InterBase available for Windows 95, NT and Unix, including transaction control, stored procedures, triggers, and even event alerters, which enable event driven programming.

- Q. What is the InterBase 4-user Windows 95 and NT license?
- A. The Borland C++Builder Client/Server Suite includes a 4 user license for InterBase for Windows 95 and NT including complete multi-user server software and full documentation. Client/Server developers can use this software to thoroughly test and tune their Borland C++Builder applications in a true multi-user environment. No need to simulate multi-user deployment on your local system – test what your users will actually see and improve the efficiency of your development process and the dependability of the applications you create and deploy.

5. Internet Solutions

- Q. How does C++Builder support internet application development?
- A. C++Builder supports key technologies from Microsoft, Sun, and Netscape including full support for Internet standards like ActiveX, CGI, ISAPI, WinInet, and NSAPI. And with the Borland Internet Solutions Pack, developers can build Internet-enabled C++Builder applications with familiar rapid application development techniques—just drop a component on a form and interact with its properties and events. The ActiveX controls included let you build customized Web browsers, manage Internet mail, transfer files, or connect to network newsgroups.

Borland C++Builder Compatibility

1. C++ Tools Compatibility

- Q. Can I use C++Builder with Borland C++?
- A. C++Builder complements Borland C++ 5.01 development with common language support, shared features, code and tool interoperability, and common companion tools. C++Builder is built on the same high-performance back-end compiler technology as Borland C++—including support for all the newest ANSI/ISO language features. Identical implementation of many features including CPU view and command-line tools makes combined use a natural fit. Complementary project file support is provided, and with the complete technical documentation and examples on code sharing and reuse that are included, you can easily use C++Builder forms

in your OWL applications! And both C++Builder and Borland C++ integrate full development cycle support with industry-standard tools including InstallShield and PVCS.

- Q. Can I use C++Builder with Microsoft Visual C++?
- A. C++Builder compiles all ANSI C++ code, and allows you to build fast, productive front ends for your Visual C++ applications. You can easily host C++Builder forms in your MFC applications. Plus, get full support for industry standards, including ANSI C++, the Win32 API, ActiveX, OLE Automation, ODBC, DCOM, DirectX, MAPI, Unicode, WinSock, ISAPI, and NSAPI.

2. Delphi Compatibility

- Q. How interoperable is C++Builder with Delphi?
- A. C++Builder and Delphi share the same Visual Component Library, the same intuitive IDE, the same visual Two-Way Tools, the same third party components, and the same companion tools. C++Builder can easily use Delphi forms, Data Modules, components, and code. C++Builder and Delphi can share engine code in DLLs or OBJs. Together, C++Builder and Delphi developers are an extremely productive team—combining their efforts and code while working within the development environments best suited to their skills, preferences, and projects.

Borland C++Builder Impressions

1. C++ Developer Reactions

- Q. What are major C++ development sites saying about C++Builder?
- A. "Borland C++Builder has the power and the built-in tools to enable me to do C++ development quickly," – Mike O'Brien, a Programmer/Analyst at the State of California's Employment Development Department Futures Lab, San Luis Obispo, CA
- A. "Borland C++Builder is really what we've been looking for. It gives us the benefits of C++ -- multiple inheritance, operation overloading -- with the productivity of Delphi. Globally, the product has great potential. The IDE is far superior to Optima++, which I have worked with in the past...C++Builder's responses, like Delphi's are almost instantaneous, while Optima++ is sluggish by comparison...The only RAD tool that can compare to Borland C++Builder is Delphi itself." – John Bishop, Product Design Engineer for a "Big Three" automotive company, Allen Park, MI
- A. "Borland C++Builder is a joy to use! C++Builder has Delphi's RAD productivity, it's a winning and proven development environment. I see Borland C++Builder not as a replacement for Delphi, but more of a companion product. Borland C++Builder gives me the benefits of the robustness of the rich C++ language with the powerful constructs that go along with it." – John Brush, Programmer/Analyst with the State of California's Department of Mental Health Futures Lab, Roseville, CA

2. Press / Analyst Reviews

- Q. What are the press and analysts saying about C++Builder?
- A. "Borland International Inc.'s new C++Builder, is a likely cure for the 'Delphi envy' that has afflicted C++ developers who admire Borland's Pascal-based tool kit, but need to work with the native language of the Windows API... We find the Delphi/C++Builder programming environment easier to learn and control than Microsoft Corp.'s Developer Studio... " – Peter Coffee, PC WEEK, November 18, 1996.

"[Borland C++Builder] is a positive response to Microsoft Visual C++ and [Powersoft] Optima+
+." – Evan Quinn, International Data Corp. in InfoWorld, Nov 18, 1996

3. Awards

- Q. What industry accolades has Borland C++Builder received?
- A. Borland C++Builder was selected from among hundreds of development tools as a finalist for the Byte Best of Comdex Award during Fall Comdex, November 1996, in Las Vegas! It is noteworthy that this prestigious commendation was received based upon the Comdex Preview Edition of Borland C++Builder, a prerelease version made available significantly prior to our intended ship date. Also of note: Borland C++Builder was the only C++ development tool finalist!