Base One Programming Tools and Middleware
Version 7.3

Highlights

- *Simplifies the development of cluster and grid computing solutions and provides superior database performance and reliability*

- *Extends .NET, COM/ActiveX, and MFC, supporting C#, Visual C++, VB.NET, and ASP.NET*

- *Supports Microsoft SQL Server, Oracle, IBM DB2, Sybase, and MySQL databases on Windows, Unix/Linux, AS/400, and IBM mainframes*

- *Provides access to both local and remote databases without reprogramming*

- *Enables highly scalable applications, which can execute on a single desktop all the way to a large grid or multiple clusters of application servers*

- *Delivers enterprise-class applications that can combine many web servers and application servers under a transactional Service-Oriented Architecture (SOA)*

- *Includes extensive help and sample code*

Overview

The Base One Foundation Component Library (BFC) is a comprehensive RAD framework for creating networked database applications with Visual Studio and DBMS software from Microsoft, Oracle, IBM, Sybase, and MySQL. Building on a patented "database-centric" architecture, BFC employs a unique, cross-platform data dictionary to provide enhanced security, optimization, and maintainability, making it easier and quicker to develop robust, scalable applications.

BFC provides Windows and web developers with a complete set of database and administrative components for rapidly building reliable, high performance business systems. It includes easy-to-understand facilities for efficient distributed computing (cluster and grid computing), modeled as loosely-coupled services that use the database's transaction processing to insure reliable communication, with no single point of failure. BFC uses a straightforward database representation to coordinate work and manage the scheduling and job flow of applications in distributed computing.

Return on Investment

Customers have estimated that the cost of developing applications using BFC can be reduced by as much as 75% over other development frameworks, and the people cost to operate and maintain these applications can be reduced by as much as 85%.

Feature	Benefit
Distributed computing support	Applications developed with BFC can participate in a complex of grid / cluster processors and achieve an order of magnitude decrease in cost and increase in performance
Database support	Supports all major database vendor offerings; applications can support multiple databases with no source code changes. Different locations can have different databases and run the same application

Single, consistent API	Applications can be developed using one common body of source code and then be deployed as desktop, server or multi-processor implementations
Local and remote database support	The same source code can be used for local or remote databases. Changing physical location of the database does not impact the application. PCs accessing remote databases do not require any database vendor code to be located on the remote computers
Queuing, job scheduling and management	Base One's queuing, batch job scheduling and job management leverage the recoverability and reliability of the major database vendor implementations. Job and transaction status is logged and recovery is managed with the reliability of the underlying database implementation. There is no "single point of failure" due to master / slave job scheduling and non-standard recovery methods, as in other distributed processing systems
Data dictionary	Base One's middleware uses information stored in the Base One Data Dictionary, which includes a complete description of record layouts and indexes, for validation and to optimize performance for each database vendor's unique database implementation. Developers can focus on application value, because performance is addressed by Base One's core components
Command processor	Easy-to-use, database scripting language that can execute DOS and SQL commands for storing, retrieving, moving, and changing data
Attached objects	Allows records to include (logically) multiple compressed BLOBs (Binary Large Objects), such as images, text, sounds, documents, spreadsheets, or anything else the business requires (programmer defined data types)
Scroll cache	Database browses never cause a significant delay, no matter how large the database. BFC automatically forces index searches and avoids inefficient sorts. Programmers specify queries in the simplest way and these are automatically adjusted to improve performance
Optimistic concurrency	Isolates user database interaction. One user cannot cause lockouts to other users
Large batch record processing	Allows large batches of new records and changes to records without having to shut down normal operations
Sophisticated error handling	Programmers can quickly find and correct errors, including failures that happen in production, through the extensive help facilities supplied with BFC
Database trace facility	Debugging support is provided for resolving performance problems by displaying or logging all database function calls, parameter values, SQL statements, and timing information
Deployment and provisioning	Applications deployed using Base One tools and middleware utilize the organization's existing provisioning and change control systems
Accounting, chargeback	Easy integration with an organization's existing administration, accounting, and chargeback systems
Security	Supports access controls for determining which users should be allowed to view sensitive data or perform restricted operations. Easy integration with an organization's existing database and network authentication and authorization mechanisms

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