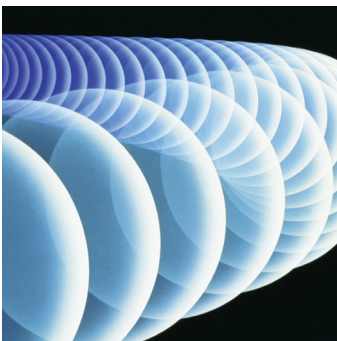


*To achieve the true benefits of open, relational technology, companies need well-integrated systems capable of delivering the reliability and scalability that core, line-of-business applications demand.*

*The UniVerse® extended relational database solution from Informix Software is such a system. It provides the capabilities you need to produce, enhance and deploy high-performance business applications in open systems environments. Standards-compliant and flexible, UniVerse provides data access storage and management capabilities across Windows NT and UNIX platforms, including Linux.*



UniVerse is the heart of a complete development solution that offers a full suite of tools and services for:

- Visual Basic, Visual C++ and ActiveX based tools
- Business intelligence, data marts and data warehousing applications
- Distributed database and enterprise connectivity solutions
- E-commerce solutions

UniVerse is versatile enough to adapt to a wide range of solutions. It uses an open client/server architecture that is scalable and cost-effective for both large and small organizations. UniVerse provides the core functionality developers need to quickly build and deploy OLTP applications.

UniVerse is the ideal database for client/server and Web-based application development because of its low administrative maintenance, broad hardware platform support, and industry standard interfaces. It maximizes interoperability through support of both industry and de facto standards, including fully integrated ANSI-standard SQL, ODBC, ActiveX and Java database interfaces.

### **Create Line-of-Business Applications**

Developers can take advantage of UniVerse's native, high-performance, record-oriented, non-SQL programming paradigm. When used in conjunction with the UniVerse stored procedure database environment, it provides a rapid and real-world approach to application development that minimizes development time and maximizes operational performance. The result is an exceptionally developer-friendly system.

### **Standards Ensure Interoperability**

UniVerse fully supports industry standard interfaces, such as fully integrated ANSI standard, SQL, ODBC and ActiveX controls (OCX) database interfaces. It also provides enterprise data source connectivity to relational and non-relational data using any available ODBC driver on UNIX or Windows NT.

### **High Performance and Scalability**

UniVerse, using SMP-based hardware, scales from the smallest workgroup to thousands of concurrent users. UniVerse solutions for both UNIX and Windows NT are economically sized and economically priced, compared to other RDBMS's.

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## Resource Efficiency

The entire database environment automatically and dynamically adjusts the correct table space allocation to fit the size of the database and tables. This provides optimum performance and minimizes disk usage for maximum efficiency. This capability also streamlines the traditional tasks of the database administrator (DBA) in monitoring, reconfiguring and maintaining the database.

UniVerse provides an advanced and cost-effective database management system that exhibits outstanding performance, increases developer productivity, and simplifies system administration, making it the ideal platform for application development and deployment.

## UniVerse Features

### Administration

- Online backup by record, file, table, database
- Warm-start recovery
- Supports high-availability disk subsystems
- GUI administration tool

### Large Database Support

- Horizontal table partitioning
- Multiple segment partition tables
- High-speed bulk-data loader
- Parallel Index build

### SQL Implementation

- ANSI SQL 1989 level 2 compliant with integrity enhancements
- ANSI SQL 1992 entry level compliant
- ODBC 2.0 core level API
- Robust SQL extensions
- ANSI declarative entity and referential integrity constraints

### Concurrency Control

- Contention-free queries
- Table- and row-level locking
- ANSI 1992 Isolation levels (1-4)
- Implicit/explicit lock management

## Database Characteristics

- Variable length columns and rows
- Automatic table space management
- Clustered tables and indexes
- Automatic unique indexes by primary key
- Hash indexes
- NF2 extensions
- B-Tree secondary indexing
- Calculated column definitions
- Cost-based/rule-based optimization

## National Language Support

- Supports Unicode standard
- Accommodates single or multi-byte characters simultaneously
- Per session control of character mapping and national conventions
- Support for national conventions, including date/time, monetary, collate, casing and numeric representation

## Transaction Management

- Automatic roll forward and roll back
- Journaling (pre-image)
- Selectable ANSI 1992 Isolation levels (1-4)
- Deadlock detection and resolution
- Transaction logging
- Check-pointing and warm-start recovery

## SQL Procedures

- Shared, compiled form
- Easy-to-use BASIC
- Nested transactions
- Appropriate isolation levels
- Callable from all development interfaces
- Multiple, parallel procedure execution
- Interactive debugging facilities
- RPC Support

## Database Triggers

- Fired once per row after any file I/O operation, including INSERT, UPDATE and DELETE
- Support for BEFORE, AFTER, ENABLE and DISABLE syntax
- Uses the UniVerse BASIC Stored Procedure language
- Modeled on ANSI SQL3 specification

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### **Distributed Database**

- Full location transparency
- Transparent multi-site distributed queries
- RPC support
- TCP/IP networking

### **Data Replication**

- Publication and Subscription methodology
- Automatic multi-site, multi-table replication
- Continuous or snap shot options
- Hot standby mode

### **Programmatic ODBC Gateways**

- Supports any ODBC 2.0 compliant driver
- Available for Windows NT and UNIX  
ODBC driver managers

### **Interfaces**

- Windows ODBC drivers
- OLE DB Provider
- Object oriented native interface
- ActiveX control (OCX)
- 100% Pure Java API

### **Development Tools**

- Visual InterDev/Basic/C++
- Delphi
- Any ActiveX- or ODBC- or OLE  
DB-enabled tool
- Any Java-IDE

### **UniVerse RDBMS Release 9.6**

UniVerse 9.6 offers selected new features in the areas of server-to-server interoperability, development environment enhancements, configurable century pivot date and core engine enhancements.

### **Server-to-Server Interoperability**

In today's Web environment, interoperability must include the ability to communicate with or even drive Web-based applications from your UniVerse application. Leveraging our common middleware infrastructure, UniVerse now offers CallHTTP, a Basic client interface to any HTTP server that supports the level 1.1 HTTP protocol including URL encoding, multi-part formats and redirection. CallHTTP includes API functions to provide application logging.

The UniVerse Basic Socket API provides the ability to interact with an application running on another machine via the socket interface. The Socket API enables you to write distributed Basic applications by supporting both server and client interfaces that can cooperate on tasks through efficient, easy to implement socket communication.

### **Development Environment**

UniDebugger is the Graphical IDE that interfaces with UniVerse Basic and its RAID debugger, providing a Windows-based workspace with multiple windows to show the source code, application, breakpoints, watched variables, and any messages from the debugging session. The editor provides full screen, cut and paste, and keyword color-coding. The debugging interface allows you to set break and watch points, execute line by line, or step into and over subroutines.

### Century Pivot Date Configuration

UniVerse 9.6 offers a new configuration option to modify how 2-digit years are interpreted upon input. The default is that 00-29 are interpreted as 2000-2029 while 30-99 are interpreted as 1930-1999. With the new Century Pivot Date configurable option you can change the default interpretation to more closely match user needs or industry standards.

### Core Engine Enhancements

A major focus of UniVerse 9.6 enhancements includes core engine enhancements concentrating on improving usability and stability. Our technical support group, acting as customer advocates, prioritized engineering efforts.

UniVerse 9.6 also includes a 32-bit replacement for UV/Term, Dynamic Connect™, which provides full support for device licensing.

### Hardware/Software Requirements

The UniVerse relational database solution runs on all major uni-processor and SMP-based hardware platforms. It can run on Windows NT or UNIX, across Intel and RISC systems. UniVerse requires a suitable mass media device such as a CD-ROM drive.

### Additional Tools for UniVerse

- **SB+**—A 4GL development environment for host-based and client/server applications
- **SBClient**—The SB+ client component of a client/server solution that brings GUI features to host-based applications
- **RedBack®**—Multi-threaded, rules-based application server for building and delivering e-commerce solutions for OLTP
- **wIntegrate**—GUI application revitalization and desktop integration tool
- **DataStage® Suite**—Comprehensive, integrated tools for data movement, metadata management, data quality and ERP integration

Please contact your local sales representative or visit <http://www.informix.com> for more information.

### About Informix

Informix Software is the technology leader in software infrastructure and solutions for the Internet. Informix brings a focused set of products and services that integrate e-business and business intelligence on an Internet infrastructure. For more information, contact the nearest sales office or visit the Web site at [www.informix.com](http://www.informix.com).



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