Rocket | **U2**

UniVerse

Reliable and Flexible Foundation for Business Solutions

Successful businesses continually push themselves to find ways to maximize their effectiveness and reduce costs. UniVerse maximizes return on investment and is built to keep costs low, delivering uncompromising reliability and power with the features that successful businesses need.

UniVerse offers a unique combination of an intuitive development environment and a powerful, reliable data engine. It is easy to embed in an application and delivers high-performance and high scalability in a small footprint. On top of that, it's very easy to use and administer.

Based on technology newer than the relational model, UniVerse uses XML-like data structures resulting in fewer tables, fewer joins and better performance.

Highlights

- Provides intuitive database design and high performance data access

- Secures data through encryption and authentication

- Ensures high availability through data replication

- Enables access via a variety of APIs, protocols, frameworks and architectures

- Provides flexible data storage choices for maximum interoperability

- Accelerates time to market and lowers TCO for business solutions

Standards-Compliant and Flexible

- Provides data access, storage and management capabilities across Windows®, Linux and UNIX® platforms

- Features a native, record-oriented integrated development environment

- Scales from the smallest workgroup to thousands of concurrent users

- Allocates table space automatically and dynamically to optimize performance and minimize disk usage for maximum efficiency

Rapid Development and Easy Administration

Developers benefit from faster development through use of the solutions integrated development environment and graphical tools, enabling them to quickly develop high-performance applications. The flexible data model makes data design intuitive and flexible, making it easy to customize and adapt. They can use many open standards, including XML, .NET, Java, SOAP, PHP, Python, Ruby on Rails and web services.

UniVerse gives administrators the tools they need to streamline DBA tasks. Features include automated administration, maximized use of storage, and easy schema management. These save time and money during development and during ongoing operations.

High Availability

The need for 24x7 operations demands resilient, recoverable databases. UniVerse delivers high availability, serviceability and recoverability. UniVerse high availability can reduce the impact to your customers and users whenever you need to take your primary systems or data offline to perform necessary maintenance tasks, such as nightly backups or the installation of new hardware or software.
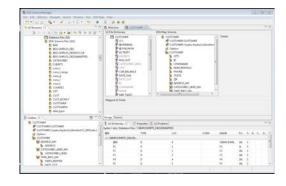
U2 Replication provides the basis for protection from unplanned outages caused by human error, software

problems, hardware failures, and environmental issues. UniVerse allows you to recover and resume mission critical applications at a remote site in the event of a disaster. Through U2 Replication, UniVerse can also build replicate databases that can be used for load-balancing your workload for such tasks as reporting or building a data warehouse.

Built-in features like dynamic file allocation, online index build and online resize help keep the database working in production and out of maintenance mode. Developers can add fields to existing files without taking the database offline for reorganization.

Interoperability

External Database Access (EDA) lets you store some or all of your data in either UniVerse files or an external database such as Microsoft SQL Server, Oracle or IBM DB2. Existing UniVerse applications can remain unchanged and transparently access and update data in a UniVerse database or an external database. Graphical tools ease schema mapping and configuration management. EDA is architected to map to both relational and XML data models. Built-in optimization ensures use of best-of-breed functionality in each environment.

External Database Access
(EDA) Schema Mapping Tool

Additional Tools

UniVerse users can benefit from the following development tools:

- **U2 Clients and DB Tools** — native and standards-based APIs such as ODBC, JDBC, J2EE, ADO.NET and Eclipse-based tools for administration, development and mapping

- **U2 DataVu** — a comprehensive data visualization platform for executive reporting and dashboarding solutions across your enterprise

- **SystemBuilder Extensible Architecture** — a cross-platform, complete, rapid application development environment with flexible, modern deployment and presentation options

- **U2 Web Development Environment** — an object-based application platform for rapid development and scalable deployment of Web applications

- **wIntegrate** — advanced terminal emulation and application enhancement tool for creating modern user interfaces
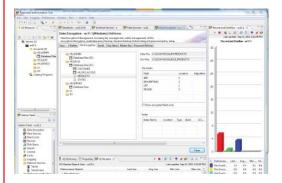
Rocket U2 Office
4600 South Ulster Street
Suite 1100
Denver, CO 80237
Tel: (720) 475-8002
Fax: (617) 630-7349

wIntegrate is a trademark of Rocket Software, Inc. in the United States, other countries or both.

All other products or product names are trademarks or registered trademarks of their respective owners.

Administration

Database administrators need to react quickly to changing demands on the database. UniVerse XAdmin provides a single viewpoint to track important statistics and resources affecting database performance. XAdmin features resizable detached views, including configurable I/O and performance monitoring. Filtering of performance information can be configured to keep the focus on critical resources. UniVerse configuration parameters can be viewed and modified while keeping the database online. You can even add your own views to XAdmin to monitor your application, the operating system or other functions. Build your own Eclipse-based tool and select views from XAdmin to include in it for a truly customizable control panel.

XAdmin Tool

Security and Authentication

UniVerse Automatic Data Encryption (ADE) provides a finer level of control to address diverse security and usability requirements. ADE allows you to configure encryption of data, indexes and keys at the field or record level, using a selection of encryption algorithms. Encrypted data can be additionally protected with passwords, allowing access only to authorized groups or users.

UniVerse supports Open Secure Sockets Layer (OpenSSL) to create secure communication channels for UniVerse-based applications. SSL is supported in UniVerse Basic programming interfaces as well as in standards-based and native interfaces. SSL provides server authentication, encryption, and message integrity and, optionally, client authentication. UniVerse also supports SSLstream, extending SSL support into the .NET environment.

Today's users and administrators have an increasing number of user-ids and passwords that must be remembered and managed. UniVerse supports pluggable authentication modules (PAM) and lightweight directory access protocol (LDAP) to enable centralized authentication. The system administrator can determine how users are authenticated in various situations, allowing UniVerse PAM-aware applications to switch authentication methods without a costly application rewrite.
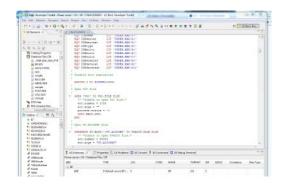
Development Tools

The Basic Developer Toolkit (BDT) is a modern, integrated development and debugging tool for the UniVerse integrated development language. Based on Eclipse, it provides multiple views with all the information you need to build applications quickly. All of the resources you need are here, including a resource explorer, code editor, dictionary editor, and an integrated debugger.

UniVerse provides several options for integration into the Microsoft .NET Framework. This flexibility allows you to build and deploy a wide variety of Web-based applications that work seamlessly with .NET. Our .NET options include an ADO.NET provider and Visual Studio add-ins that enable support for EDM.

UniVerse supports both standards-based and native .NET API's, including support for the Compact Framework. This allows you to extend your application into the world of hand held devices. Microsoft Windows mobile/embedded devices such as smart phones, PDAs, factory controllers, or set-top boxes can now be a part of your solution.

UniVerse supports numerous Java-based interfaces as well, including JBDC for standards-based connectivity and our own UniObjects for Java high speed native interface. You can leverage powerful Java programming tools including the Eclipse framework to enable powerful, platform-independent solutions.

Basic Developer Toolkit (BDT)

System Requirements

The UniVerse extended relational database solution runs on major hardware platforms including Microsoft Windows, Linux and UNIX. Please see the U2 Product Availability Matrix at rocketsoftware.com/u2/support for more information.

For more information, please contact your U2 sales representative or U2 Business Partner or visit us online at: www.rocketsoftware.com/u2

Rocket Software, Inc.