

U2 Web Development Environment

Bringing U2 Applications to the Web

Highlights

- Accesses U2 data and business logic from the Web
- Scales to handle activity peaks
- Secures data through encryption
- Provides 24x7 access
- Graphically defines, tests and debugs Web interfaces
- Supports .NET and Java-based Web development
- Allows your Web applications to speak the language of your users

Today's business applications need to be available to everyone, everywhere, all the time.

UniData and UniVerse (U2) databases provide fast, flexible development and deployment options. U2 Web Development Environment (U2 Web DE) provides a simple, powerful way to extend access to U2-based applications to the Web and beyond.

U2 Web DE lets you select your application database tables along with your library of server side programs and publish them as RedBack objects (RBOs) and methods. These objects can then easily be incorporated into .NET or Java-based development framework.

U2 Web DE applications power Web access for internet retail sales, worldwide chauffeur services, express parcel delivery, human resource systems and more.

Components

The primary components of U2 Web DE are U2 Web Designer, RedBack Objects and U2 Web DE Server.

U2 Web Designer

The U2 Web Designer is an Eclipse-based tool that deploys and installs the U2 Web DE server and configures U2 accounts to enable U2 Web DE access. U2 Web Designer lets you publish database files and programs as RedBack objects and methods that can be accessed and invoked via robust Web applications.

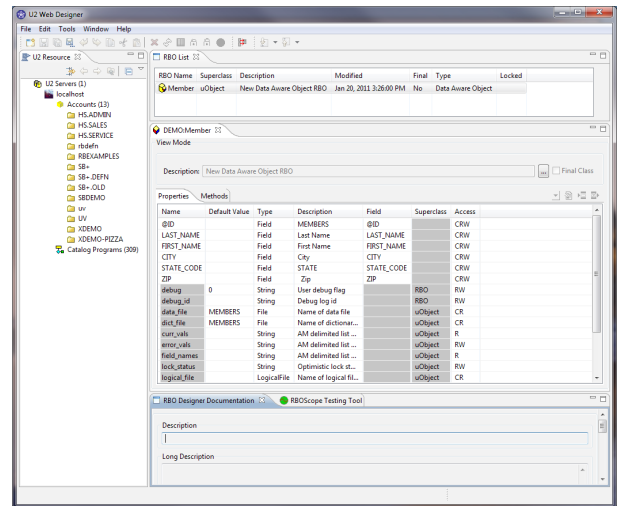
RedBack Objects

RedBack Objects (RBOs) represent the object abstraction of the back-end U2 data structure. RBOs comprise properties and methods, and are created with the U2 Web Designer from the RBO perspective. Properties can include actual U2 back-end data or interim state data. Methods define what is to be performed. Default

methods include create, read, update and delete (CRUD) operations. Existing back-end subroutines incorporating sophisticated business logic can also be used as methods.

Flexible Development Choices

User interfaces and browser standards evolve. However, business rules are pervasive. The challenges you face include choosing the appropriate technology to meet your business objectives while ensuring your systems can support the latest available technologies to help maximize your development investment. By utilizing RBOs, your development team can access the underlying U2 data structures from multiple development platforms.



RBO Perspective allows U2 Data to be defined as a RedBack Object (RBO)

An initial implementation might focus on Microsoft .NET technologies (ASP.NET) that access RBOs. Later, a new project may call for an XML or a Java™ interface. Existing RBOs, once developed, can be deployed unchanged using the many interfaces supported now, and those to come in the future.

RBOs provide flexibility on the front end with the selected user application interface technology,

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while maintaining a consistent business model and set of rules. If the business model requires modification, existing methods or properties can easily be altered in a central repository without having to disrupt the entire system. If the user application interface is redeployed using a different type, only the front-end components need to be modified and the RBOs (back-end business model) remain untouched. This gives your business an extensible, easily maintained application.

U2 Web DE Server

The U2 Web DE Server is responsible for communications between RBOs and the supported interface such as JEE Servlets, Java Server Pages (JSP) and ASP.NET (Active Server Pages). While supporting these interfaces today, U2 Web DE will be ready to introduce future interface functionality without affecting existing RBOs, allowing you to take advantage of new technologies as they become available.

U2 Web DE uses native U2 connectivity through UniObjects to connect to your back-end application server. Connection Pooling provides scalability capabilities to ensure your Web applications can handle the requests from hundreds to millions of hits per day.

Worldwide Business

U2 Web DE offers full foreign language support using UniVerse National Language Support (NLS) and UniData I18N, allowing your Web application to run in a wide selection of languages and character sets, such as Portuguese, Hindu, Simplified Chinese and more.

Secure Your Data

As applications go online and are accessible from the Web and smart phones, data security becomes even more important. U2 data servers can encrypt your data at rest through Automatic Data Encryption (ADE). U2 Web DE natively supports access to ADE-protected data via passwords, master keys and wallets.

U2 Web DE also supports encrypting data in transit through Secure Socket Layer (SSL)

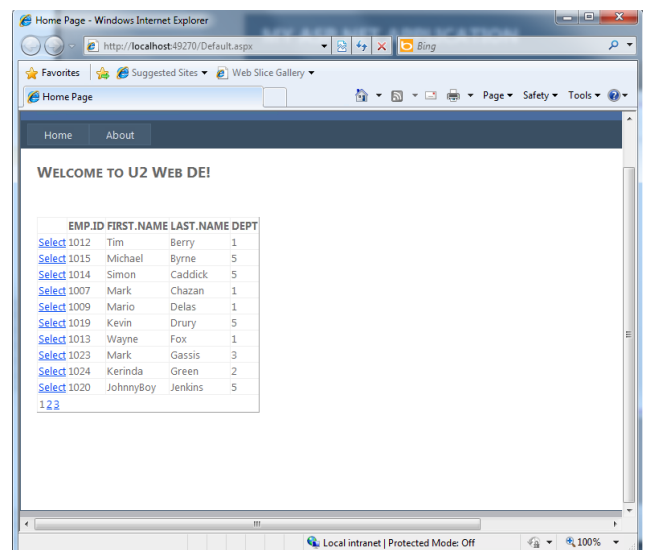
access to ensure end-to-end encryption and authentication. Users can rest assure that their personal information can be protected.

Available 7x24

Your database needs to be highly available and so does your Web application. U2 databases let you pause the I/O so you can use mirroring technology to snapshot your data and back it up securely. U2 Web DE lets your application coordinate with the database to take advantage of this capability.

Collaborate and Conquer

While some developers may possess the end-to-end skills required to create Web-based applications, collaborative development is now possible for U2 application specialists, Web designers and implementation architects.



RBOs bound to Visual Studio GridView control

U2 application specialists understand the business logic and data structures associated with a U2 application. Accordingly, they are the best resources to create the U2 Web DE object layer by developing RBOs. Working with Web designers, the U2 application specialists also define and support the required object methods.

Web designers can work with RBOs, just like any other well-defined object, without needing any knowledge of the U2 back-end, multivalued data structures.

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For Visual Studio developers, RBOs are exposed as true .NET Data Sources in the design palette. All RBO methods and properties can easily be bound to common controls on the page such as GridView, DetailsView etc.

This allows your Multi-Value developers and Visual Studio developers to coexist peacefully and focus on their own skills, thus improving productivity.

Web designers can focus on designing Web applications using their development tools of choice. Implementation architects can then decide what technologies will be used to support the Web applications. These include everything from the server components to the target client platforms such as Microsoft® Windows® clients, Web browsers, personal digital assistants (PDAs) and a myriad of mobile or micro-devices.

System Requirements

U2 Web DE Server

- UniVerse V10.3
- UniData V7.2

U2 Web Designer

- Microsoft Windows XP, Vista, Windows 7

Web Server

.NET Applications -
RedPages.NET

- Microsoft Internet Information Services (IIS) 6.x or later
- Common language runtime and class libraries
 - Microsoft .NET Framework 2.0 or later

Java Applications - RedBeans

- Tomcat 6.x or later
- Java Runtime Environment (JRE)
 - JRE 1.5 or later

Please see the U2 Product Availability Matrix at u2tc.rocketsoftware.com/matrix.asp

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