

## Progress® DataXtend™ RE

### Highlights

Progress DataXtend RE enables enterprises to distribute data from existing enterprise databases to remote offices and mobile workers, providing corporate-level quality of service all the way to the “edge” of the enterprise where connectivity may be intermittent or unavailable. DataXtend RE enables companies to manage data across multiple sites, geographies, platforms, or database management systems, through its unique patented technology for two-way, read-write replication of databases.

### Features at a Glance

- Bi-directional replication with support for site-specific data sets.
- Dynamic Data Slicing Architecture lets you provide only the data a site needs, minimizing network traffic.
- Dynamic Bandwidth-managed Partner Selection automatically manages network balancing.
- Transparent recovery model eliminates the need for managing log files manually.
- Collision Avoidance Methodology lets you tailor policies that accommodate the unique requirements of your application.
- Heterogeneous database support lets you deploy the same application on database management systems from multiple vendors.
- Advanced scheduling and intelligent replication optimizes network efficiency and security.

[www.progress.com/realtime](http://www.progress.com/realtime)

Progress® DataXtend™ RE provides essential capabilities for managing distributed databases, whether your enterprise needs simple data replication or a complete synchronization solution. With DataXtend RE, users don’t have to be connected to a network to access data. Remote offices with limited or variable bandwidth and mobile users with limited periods of connectivity can both obtain the same quality of service levels, optimized performance, and lower management costs as those in the corporate office.

The DataXtend RE distributed enterprise is managed centrally but all distributed databases are synchronized transparently with the central servers. This makes deploying and supporting distributed applications as cost effective as web-based applications but without the network limitations associated with accessing a centralized server and database.

### Bi-Directional, Update-Everywhere Model

Distributed enterprise applications built with DataXtend RE technology can run disconnected from the network. They can provide an occasionally connected computing solution for a sales or field force, or support occasionally disconnected computing for a continuous availability environment. At their core, disconnected operations are dependent on the ability to support read and write activity on the data available to the application, *as if they were connected*. Without the ability to update the dataset while disconnected, an application cannot keep pace with the demands of the distributed world.

With DataXtend RE, update-everywhere does not mean that applications must contain an identical dataset, quite the contrary. DataXtend RE allows each site to have its own unique dataset. This ability to support site-specific datasets can provide regional offices and individual users with precisely the subset of corporate data they need.

### Dynamic Data Slicing Architecture™

DataXtend RE allows you to put the data you need at each site using its patented Dynamic Data Slicing Architecture (DDSA). DDSA operates at multiple levels allowing the dataset available to be defined dynamically. DDSA results in a subset of data called a “workset.” The workset can be setup at the schema level, using table partitioning, at the query level, maintaining the relationships between multiple tables, and at the column level by identifying specific components of a record or fragments. This powerful technology allows applications to provide the “need to know” data support required by applications with significant security requirements.

### Dynamic Bandwidth-Managed Partner Selection

Even when a replication network is operating efficiently, conditions may still change that will necessitate adjustments to the network, for instance, systems will go off-line for service or new systems will be added. In a large distributed system managing change can be a difficult task. DataXtend RE’s patented Dynamic Bandwidth-managed Partner Selection (DBPS) technology enables the DataXtend RE network to adapt to change. With DBPS, each site in the network contributes to an active auto-discovery and auto-balancing protocol that allows systems to route around any failures

in the network. DBPS avoids overloading any one server since failure detection and recovery is part of the normal site selection process that all sites perform.

### Transparent Recovery Model

When failures do occur, DBPS eliminates the need to manage the network, but what about the data? DataXtend RE's transparent recovery model eliminates the need for an administrator to find and provide log files. By eliminating log file management, DataXtend RE allows recovery to occur even when systems are offline for an extended time. If a system needs to operate offline for weeks or even months, it will reconnect to the replication network and recover its dataset automatically.

### Collision Avoidance Methodology

When running distributed systems capable of fully disconnected operation, it is inevitable that users will generate conflicting changes. DataXtend RE addresses these issues to minimize impact on the underlying application. For example, an important element of collision avoidance is ensuring that unrelated columns in individual records do not yield conflicts even when the same record is updated. DataXtend RE provides Record Fragment Management to allow groups of related columns to be identified and defined to eliminate unnecessary conflicts. DataXtend RE has a rich API to enable the creation of application-specific conflict resolution policies.

### Heterogeneous, Multi-Vendor Solution

DataXtend RE-enabled applications work with a variety of major commercial and open source databases from vendors like Oracle, Microsoft, IBM, and Sybase. And the same application can be deployed on different databases. For instance, it might be deployed on Oracle in the primary data center and Microsoft in a remote office. This flexibility means that application deployment decisions can be changed without having to modify the synchronization mechanisms used to maintain a consistent data set.

### Maximize Network Efficiency and Security

DataXtend RE maximizes network efficiency, starting with net change compression which minimizes the amount of data that needs to be transmitted between systems. Optimizing the data that needs to be shipped between systems reduces bandwidth requirements from those that are typically required for log-based replication schemes.

Synchronization can be done in different ways to match the needs of individual systems. Any mix of scheduled, programmed or manual initiation of the coordination process can be accommodated. An additional benefit of DDSA and worksets is that they minimize the data requirements at very remote or bandwidth-constrained sites. Finally, all interaction between systems is done over encrypted channels with automatically managed encryption keys.

### Operating Platforms

Progress® DataXtend™ RE  
– Windows 2000, XP, 2003  
– Red Hat and SUSE Linux



www.progress.com  
Specifications subject to change without notice.  
© 2005 Progress Software Corporation.  
All Rights Reserved.



#### Worldwide and North American Headquarters

Progress Real Time Division, 14 Oak Park, Bedford, MA 01730 USA Tel: +1 781 280 4000

#### UK and Northern Ireland

Progress Real Time Division, 210 Bath Road, Slough, Berkshire, SL1 3XE England Tel: +44 1753 216 300

#### Central Europe

Progress Real Time Division, Konrad-Adenauer-Str. 13, 50996 Köln, Germany Tel: +49 6171 981 127

#### France

Progress Real Time Division, 3 Place de Saverne, Les Renardières B, 92901 Paris la Défense Tel: +33 1 41 16 16 56

[www.progress.com/realtime](http://www.progress.com/realtime)

DataXtend and Dynamic Data Slicing Architecture are trademarks or registered trademarks of Progress Software Corporation or one of its affiliates or subsidiaries in the U.S. and Canada. Any other trademarks or service marks contained herein are the property of their respective owners.