

*Every organization needs fast, reliable, and flexible access to information for business analysis and decision making. The Informix<sup>®</sup> Red Brick<sup>®</sup> Decision Server<sup>™</sup> is designed to meet the specialized requirements for business-critical, high-demand data analysis including fast load performance, high-capacity and high-performance query processing, and efficient management of very large databases. Red Brick Decision Server places your business problems first, addressing the ease of implementation, management, and use requirements that are critical to maintaining a business focus. Designed to be practical, cost effective, and scalable, Red Brick Decision Server enables more users to analyze more data and make better decisions faster.*

**Product Benefits**

- **Faster, more intelligent decisions**  
The Red Brick database server's extraordinary performance is based on its capability to fully leverage the potential of the star or snowflake schema data warehouse design, delivering a foundation that is fast, easy to implement, and ideal for a full range of business intelligence applications.
- **Reduced costs**  
In addition to providing an efficient decision support system for business users, Red Brick Decision Server can impact your bottom line by minimizing administration costs. In fact, compared to traditional general-purpose (OLTP) databases, customers report that they need fewer database administrators to manage the Red Brick server, which requires less system monitoring and performance tuning.
- **Scalability**  
Integration and scalability are critical considerations for meeting the demands of growing organizations and the increasing volume of business intelligence data. Red Brick allows access to terabyte-scale data warehouses by thousands of business users at a fraction of the cost of traditional relational-database management systems.

**Product Attributes**

Red Brick Decision Server offers robust attributes, which are the foundation of the decision-making process and are particularly important when processing large volumes of data, or when only small windows of time are available for updating the databases.

- **Superior performance with advanced indexing**  
Informix Red Brick Decision Server uses a variety of indexes to optimize query performance. The flexibility to accommodate different types of indexing schemes while minimizing index space is a key feature of the Red Brick technology.

A STARindex<sup>™</sup> accelerates join processing between multiple tables. Red Brick STARjoin<sup>™</sup> technology leverages referential integrity relationships in a star or snowflake schema and uses STAR indexes to provide industry-leading query performance and scalability. B-Tree indexes are automatically created by Red Brick Decision Server on each primary key to ensure uniqueness and foreign-key referential integrity. Additional B-Tree indexes may be created by an administrator on other columns for increased query performance.

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Red Brick Decision Server also implements TARGETindex™ to improve performance when queries consist of multiple weakly selective constraints, such as quarter, gender, or country. TARGETjoin™ processing uses TARGET or B-TREE indexes on the foreign keys of a referencing (fact) table to perform multi-table joins. TARGETjoin and STARjoin processing are complementary, and in combination, the technologies offer excellent performance for a wide range of queries.

- **Dynamic run-time optimization**

The Red Brick server can re-evaluate and adjust the execution plan of a query, at run time, based on information obtained from intermediate results. This feature, coupled with the Red Brick technology for parallelism and parallel on demand, helps maximize query efficiency and system throughput.

- **Superior performance in data aggregation**

A key component of the Red Brick server is Red Brick Vista™, a comprehensive, server-integrated solution for aggregate computation and management. Aggregate computation is an important component of decision support applications. In large data warehouse environments, aggregate query processing can be computationally intensive. Vista provides an effective strategy for achieving exceptional query performance through the use of pre-computed aggregates while minimizing the costs associated with creating and maintaining such aggregates. The Vista query rewrite component automatically rewrites queries on detail data to use pre-computed aggregates. This transparent rewrite function allows end users, query tools, and application programmers to derive the performance advantages of aggregates without having to change queries and applications.

The Advisor component of Vista aids the DBA in determining an optimal set of aggregates required to satisfy a system's unique performance and space requirements. It helps maximize the potential benefit of aggregates while minimizing the associated costs by analyzing where aggregates can improve warehouse performance, based on an analysis of query logs. The transparent aggregate maintenance feature of Vista query rewrite, in Informix Red Brick Decision Server 6.10, further reduces the costs associated with maintaining aggregates.

- **Superior performance in data loading**

The implementation of a data warehousing solution can be a complex process because data warehouses are often populated with data from many different sources including mainframes, OLTP databases, purchased data, the Web, and other external sources.

Red Brick's bulk data loader, the Table Management Utility (TMU), performs the tasks required to guarantee that data is query-ready—faster. It enables row data insertion, referential integrity checking, and updating of all relevant indexes and aggregates—all in one server-integrated load process. TMU's load performance lowers hardware and administration costs and guarantees that you have the data you need—when you need it.

The Parallel Table Management Utility (PTMU) performs all of the functions of the TMU and takes advantage of Symmetric Multi Processing (SMP) parallelism. PTMU uses sophisticated algorithms optimized for data warehousing to allow initial and incremental loads to proceed with full referential integrity checking, index maintenance, and aggregate maintenance at exceptionally high speeds.

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- **Concurrency**

Informix Red Brick Decision Server provides a concurrency feature called Query Priority Concurrency. This feature is based on a versioning mechanism and is designed specifically for decision support environments so that query execution remains unaffected during data modification and loading operations. A related feature, Frozen Query Revision, allows users to query the current published version of the data warehouse while the administrator is preparing the next version of the warehouse for publication.

- **Time-cyclic data management**

This feature allows you to efficiently handle time-sensitive data. If a data warehouse is designed to contain a rolling set of time periods, time-cyclic data management enables the removal of old segment space, which can be reused for new segments—optimizing performance and lowering administrative costs.

### **What's New in Red Brick Decision Server version 6.10?**

Red Brick Decision Server, version 6.10, continues the Red Brick history of features designed for high performance, easy implementation, and low maintenance. Key features include:

- **Aggregate maintenance**

Vista now provides transparent maintenance of aggregates. When detail tables are modified, either through server-based DML operations or through the TMU, these changes are automatically propagated to the aggregates. This server-integrated solution provides an automatic and efficient way of keeping aggregates “in-sync” with detail data, thereby simplifying the administration tasks associated with aggregates while maximizing their usability.

- **Sampling**

This feature allows random sampling of data. It is useful for applications such as data mining and provides the ability for users to efficiently produce approximate results based on sampled sets of data. Sampling can be performed on any table or sub-select in a query, and can be block-based or row-based.

- **Loader enhancements**

Version 6.10 of Informix Red Brick Decision Server includes several enhancements to the TMU. These include optimizations and parallelism support for loads involving modifications to existing data and improvements to referential-integrity checking.

- **Query optimizations**

New enhancements to Red Brick's query engine further improve the performance of complex queries. These include improved plan selection for queries involving multi-table joins, and query plan transformations that enable better utilization of join techniques and indexes for more efficient processing of queries containing multiple blocks.

- **Platform Support**

Informix Red Brick Version 6.10 is now also available on Linux and Windows 2000.

- **Connectivity**

The Red Brick JDBC and ODBC drivers now support JDBC version 2.0 and ODBC version 3.5, respectively.

**Platform availability**

The Informix Red Brick Decision Server, version 6.10, is available on the following platforms:

Operating System	Version
Sun Solaris	2.6, 2.7, (7) and 8
Sun Solaris 64-bit	2.7 (7) and 8, 64-bit
AIX	4.3.2 and 4.3.3
AIX-64	4.3.2 and 4.3.3, 64-bit
HP-UX	10.20 and 11.00
HP-UX-64	11.00
Compac TRU-64	4.0F 4.0G and 5.0
Linux	2.2.12 (Kernal), 2.1.2 (glibc)
Windows NT	4.0 with Service Pack 5 and 6
Windows 2000	Windows 2000 "Server" and Windows 2000 "Professional" for the client side
IRIX	6.5.7

**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. The Company's highly scalable database engines, in addition to its business intelligence, content management and e-commerce solutions, enable customers to succeed in the new economy. For more information, contact the nearest sales office or visit the Web site at [www.informix.com](http://www.informix.com).

**Summary**

Fast, reliable, and flexible access to information that is needed for business analysis and decision-making is a business imperative that requires a system that can store all of your business data, and quickly and reliably answer the widest range of business questions. These high performance requirements demand a product with specialized technologies. Through the application of innovative technology, Informix Red Brick Decision Server 6.10 provides a robust and scalable platform for developing business-critical decision support applications. No matter how complex your needs, Informix Red Brick Decision Server will help you deliver solutions faster, keep costs low, and provide the unprecedented ability to answer the most complex business questions.



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