ORACLE BERKELEY DB

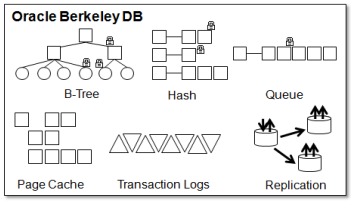
OVERVIEW

ORACLE
BERKELEY DB

- Database services in a self-contained software library
- Access SQL data using the SQLite3 API, ODBC, JDBC, and ADO.NET
- Use FullText indexes to search SQL databases
- Use Rtree indexes to manage spatial data in SQL databases
- Manage data as key/value pairs or using SQL
- Btree, Queue, Recno, Hash data indexes
- Concurrent access by multiple threads or processes
- Recoverable ACID transactions with multiple isolation levels (including MVCC), nested transactions and long running transactions.
- Replication for high availability, fault-tolerance, fail-over, read-scalability, etc.
- Partition data based on key ranges
- Support for compression of data items
- Support for database file encryption, hardware acceleration on Intel
- Store data and transaction logs in memory or on disk or both
- Zero oversight administration, all tasks performed programmatically
- Scales to 256 terabytes of data in a single data file, multiple data files supported
- Efficient concurrent access on multi-core and multi-processor systems
- Library size less than 1MB
- Source code available

Oracle Berkeley DB is a high-performance embeddable database providing SQL, Java Object and Key/Value storage. Berkeley DB offers advanced features including transactional data storage, highly concurrent access, replication for high availability, and fault tolerance in a self-contained, small footprint software library.

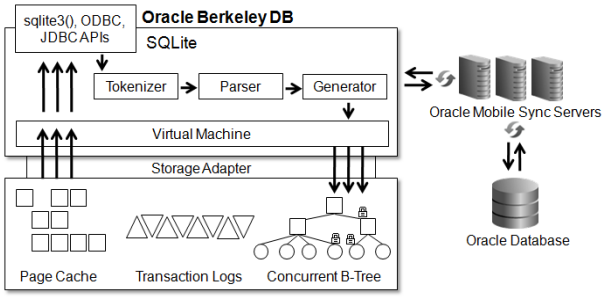
Embedded Data Management



Embedded, mobile and edge applications have specific data management needs. They run unattended – in routers, mobile phones and software infrastructure. An embedded database must be a highly robust, secure, and resource-frugal solution with support for multiple APIs and storage options to accommodate a wide variety of challenges. Embedded data storage can be straight forward, simple and work every time without exception – if you choose Berkeley DB.

Oracle Berkeley DB satisfies the demands of this new generation of mobile and device applications by providing the same features – transactions, failure recovery, high concurrency, scalability and replication for high availability – expected of client/server enterprise-scale SQL databases. BDB is designed for zero oversight in deployment, automating all administrative tasks with programmatic APIs. If you do not need SQL then use the key/value API for data storage. Berkeley DB manages key/value data in any format, encoding or schema; your application implements its implements its own optimal data storage. Berkeley DB meets your mobile and embedded data storage requirements regardless of how complex they might be.

Relational Storage, SQL Access



Berkeley DB supports SQL. Manage relational data and access it with the industry standard APIs ODBC, JDBC, ADO.NET or using the SQLite3 API. Berkeley DB's SQL implementation is, in fact, SQLite's SQL processor layered on top of the Berkeley DB Btree. This brings together the best small-scale SQL92 engine with the best transactional indexed data storage library. The result is a perfect database for mobile and embedded systems.

BERKELEY DB – SQL & KEY/VALUE DATA

BERKELEY DB DELIVERS SQL AND KEY/VALUE STORAGE, SCALABILITY AND RELIABILITY IN A SOFTWARE LIBRARY.

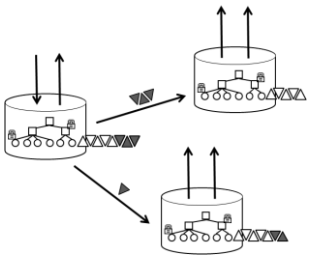
KEY BENEFITS:

- SQL or key/value access
- Very high performance
- Local, in-process storage
- High concurrency
- Suited to mobile devices
- Transactional data integrity
- Automatic recovery
- Replication for high availability
- Zero administration

RELATED PRODUCTS AND SERVICES:

- Berkeley DB Java Edition
- Berkeley DB XML
- Mobile Sync Server

Replication



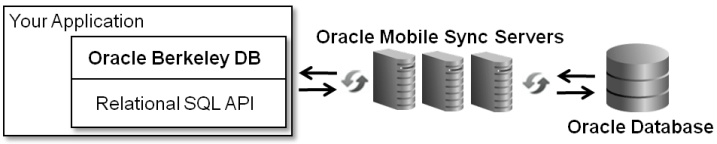
Berkeley DB provides a single-master, multi-replica highly available database configuration. Transactional data is delivered to all replica nodes with flexible consistency policies per transaction. In the event the master replica node fails a PAXOS-based automated fail-over election process minimizes downtime. This allows for read scalability, fail-over, hot-standby and other distributed configurations, giving you enterprise grade features in a small, embedded package.

Performance

Berkeley DB is designed for high-performance, transactional data management. The in-process architecture enables speed and reduces complexity. The Berkeley DB engineering team has optimized the software for more than fifteen years with countless real-world deployments in mission-critical applications. A rich set of APIs allow developers to tailor caching, locking, logging and other crucial subsystems to deliver outstanding performance without sacrificing reliability, regardless of the runtime environment – large or small.

Synchronize Relational Data with Oracle Database

Oracle Berkeley Database helps to extend the reach of existing applications to mobile devices by supporting unparalleled performance and a robust data store on the mobile device. Oracle Lite Mobile Server delivers critical bi-directional data synchronization capability to mobile devices, while providing a centralized backend interface for managing mobile deployments.



Flexible, Yet Predictable

Because requirements vary so widely, a database system must offer developers very fine-grained control over configuration, policies and resource allocation. At the same time, modern mobile and ISV software will always require concurrency, reliable recovery, and ease of adoption. Berkeley DB delivers on these requirements while providing predictable performance regardless of database size. Berkeley DB is the only database able to meet your needs without compromise.

ORACLE