

[D. J. Bernstein](#)

[Data structures and program structures](#)

cdb

[How to install cdb](#)

[The cdbget program](#)

[The cdbmake and cdbdump programs](#)

[The cdbstats and cdbtest programs](#)

[The cdb format specification](#)

[The cdb-reading library interface](#)

cdb is discussed on the [cdb mailing list](#).

What is it?

cdb is a fast, reliable, simple package for creating and reading constant databases. Its database structure provides several features:

- **Fast lookups:** A successful lookup in a large database normally takes just two disk accesses. An unsuccessful lookup takes only one.
- **Low overhead:** A database uses 2048 bytes, plus 24 bytes per record, plus the space for keys and data.
- **No random limits:** cdb can handle any database up to 4 gigabytes. There are no other restrictions; records don't even have to fit into memory. Databases are stored in a machine-independent format.
- **Fast atomic database replacement:** cdbmake can rewrite an entire database two orders of magnitude faster than other hashing packages.
- **Fast database dumps:** cdbdump prints the contents of a database in cdbmake-compatible format.

cdb is designed to be used in mission-critical applications like e-mail. Database replacement is safe against system crashes. Readers don't have to pause during a rewrite.

Information for distributors

You may distribute unmodified copies of the cdb package.

Packages that need to read cdb files should incorporate the necessary portions of the cdb library rather than relying on an external cdb library.

Related packages

Tim Goodwin's [CDB_File](#) is a Perl interface to cdb.

M. J. Pomraning's [python-cdb](#) is a Python interface to cdb.

Kazuteru Okahashi's [ruby-cdb](#) is a Ruby interface to cdb.

Michael Alyn Miller's [sg-cdb](#) is a Java library to read cdb files.

Taj Khattra's [luacdb](#) is a Lua interface to cdb.

Felix von Leitner's [rdbm](#) combines cdb with a separate journal of database updates.

David Wilson's [python-pure-cdb](#) is a Python reimplementation of cdb.

cdb is used in my [djbdns](#), [fastforward](#), [mess822](#), [qmail](#), and [ucspi-tcp](#) packages.