Database server

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A **database server** is a server which uses a [database application](https://en.wikipedia.org/wiki/Database_application) that provides [database](https://en.wikipedia.org/wiki/Database) services to other computer programs or to [computers](https://en.wikipedia.org/wiki/Computer), as defined by the [client–server](https://en.wikipedia.org/wiki/Client%E2%80%93server) [model](https://en.wikipedia.org/wiki/Software_modeling).[[*citation needed*](https://en.wikipedia.org/wiki/Wikipedia:Citation_needed)][[1]](https://en.wikipedia.org/wiki/Database_server#cite_note-1)[[2]](https://en.wikipedia.org/wiki/Database_server#cite_note-2) [Database management systems](https://en.wikipedia.org/wiki/Database) (DBMSs) frequently provide database-server functionality, and some database management systems (such as [MySQL](https://en.wikipedia.org/wiki/MySQL)) rely exclusively on the client–server model for database access (while others e.g. [SQLite](https://en.wikipedia.org/wiki/SQLite) are meant for using as an [embedded database](https://en.wikipedia.org/wiki/Embedded_database)).

Users access a database server either through a "[front end](https://en.wikipedia.org/wiki/Front_and_back_ends)" running on the user's computer – which displays requested data – or through the "[back end](https://en.wikipedia.org/wiki/Front_and_back_ends)", which runs on the server and handles tasks such as data analysis and storage.

In a [master-slave](https://en.wikipedia.org/wiki/Master-slave_(technology)) model, database master servers are central and primary locations of data while database slave servers are synchronized backups of the master acting as [proxies](https://en.wikipedia.org/wiki/Proxy_server).

Most database applications respond to a [query language](https://en.wikipedia.org/wiki/Query_language). Each database understands its query language and converts each submitted query to server-readable form and executes it to retrieve results.

Examples of proprietary database applications include [Oracle](https://en.wikipedia.org/wiki/Oracle_Database), [DB2](https://en.wikipedia.org/wiki/IBM_DB2), [Informix](https://en.wikipedia.org/wiki/Informix), and [Microsoft SQL Server](https://en.wikipedia.org/wiki/Microsoft_SQL_Server). Examples of [free software](https://en.wikipedia.org/wiki/Free_software) database applications include [PostgreSQL](https://en.wikipedia.org/wiki/PostgreSQL); and under the [GNU General Public Licence](https://en.wikipedia.org/wiki/GNU_General_Public_Licence) include [Ingres](https://en.wikipedia.org/wiki/Ingres_(database)) and [MySQL](https://en.wikipedia.org/wiki/MySQL). Every server uses its own query logic and structure. The [SQL](https://en.wikipedia.org/wiki/SQL) (Structured Query Language) query language is more or less the same on all [relational database](https://en.wikipedia.org/wiki/Relational_database) applications.

For clarification, a database server is simply a server that maintains services related to clients via database applications.

[DB-Engines](https://en.wikipedia.org/wiki/DB-Engines_ranking) lists over 300 DBMSs in its ranking.[[3]](https://en.wikipedia.org/wiki/Database_server#cite_note-3)

History[[edit](https://en.wikipedia.org/w/index.php?title=Database_server&action=edit&section=1)]

The foundations for modeling large sets of data were first introduced by [Charles Bachman](https://en.wikipedia.org/wiki/Charles_Bachman) in 1969.[[4]](https://en.wikipedia.org/wiki/Database_server#cite_note-dbhist-4) Bachman introduced [Data Structure Diagrams (DSDs)](https://en.wikipedia.org/wiki/Data_structure_diagram) as a means to graphically represent data. DSDs provided a means to represent the relationships between different data entities. In 1970, [Codd](https://en.wikipedia.org/wiki/Edgar_F._Codd) introduced the concept that users of a database should be ignorant of the "inner workings" of the database.[[4]](https://en.wikipedia.org/wiki/Database_server#cite_note-dbhist-4) Codd proposed the "relational view" of data which later evolved into the [Relational Model](https://en.wikipedia.org/wiki/Relational_Model) which most databases use today. In 1971, the Database Task Report Group of [CODASYL](https://en.wikipedia.org/wiki/CODASYL) (the driving force behind the development of the programming language [COBOL](https://en.wikipedia.org/wiki/COBOL)) first proposed a "data description language for describing a database, a data description language for describing that part of the data base known to a program, and a data manipulation language." [[4]](https://en.wikipedia.org/wiki/Database_server#cite_note-dbhist-4) Most of the research and development of databases focused on the relational model during the 1970s.

In 1975 Bachman demonstrated how the relational model and the data structure set were similar and "congruent" ways of structuring data while working for the [Honeywell](https://en.wikipedia.org/wiki/Honeywell).[[4]](https://en.wikipedia.org/wiki/Database_server#cite_note-dbhist-4) The [Entity-relationship model](https://en.wikipedia.org/wiki/Entity-relationship_model) was first proposed in its current form by [Peter Chen](https://en.wikipedia.org/wiki/Peter_Chen) in 1976 while he was conducting research at [MIT](https://en.wikipedia.org/wiki/MIT).[[5]](https://en.wikipedia.org/wiki/Database_server#cite_note-5) This model became the most frequently used model to describe relational databases. Chen was able to propose a model that was superior to the navigational model and was more applicable to the "real world" than the relational model proposed by Codd.[[4]](https://en.wikipedia.org/wiki/Database_server#cite_note-dbhist-4)

References[[edit](https://en.wikipedia.org/w/index.php?title=Database_server&action=edit&section=2)]

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  3. [**^**](https://en.wikipedia.org/wiki/Database_server#cite_ref-3) [*"DB-Engines Ranking"*](http://db-engines.com/en/ranking)*. DB-Engines.com. 2018-01-23. Retrieved 2018-01-23.*
  4. ^ [Jump up to:***a***](https://en.wikipedia.org/wiki/Database_server#cite_ref-dbhist_4-0) [***b***](https://en.wikipedia.org/wiki/Database_server#cite_ref-dbhist_4-1) [***c***](https://en.wikipedia.org/wiki/Database_server#cite_ref-dbhist_4-2) [***d***](https://en.wikipedia.org/wiki/Database_server#cite_ref-dbhist_4-3) [***e***](https://en.wikipedia.org/wiki/Database_server#cite_ref-dbhist_4-4) [*"Databases - History & Early Development"*](https://web.archive.org/web/20120420063339/http:/knol.google.com/k/databases-history-early-development)*. Archived from*[*the original*](http://knol.google.com/k/databases-history-early-development)*on 2012-04-20. Retrieved 2016-07-08.*
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See also[[edit](https://en.wikipedia.org/w/index.php?title=Database_server&action=edit&section=3)]

* [Database replication](https://en.wikipedia.org/wiki/Replication_(computer_science)#Database_replication)