

## Abstract

DBMS performance is one of many things that have to be considered in choosing a DBMS. To fulfill the performance challenge, a new architecture paradigm which is called column-stores database arises. With this new paradigm, hopefully, the problem of DBMS performance especially in accessing data will be solved.

There are two obvious ways to map a relational database table onto a storage interface: store the table row-by-row, or store the table column-by-column. Almost all conventional DBMS implement row-stores architecture because it is often used on the most common application especially in transactional applications. However, there are a set of emerging applications for database systems for which the row-by-row layout performs poorly. These applications are more analytical in nature, whose goal is to read through the data to gain new insights and use it to drive planning and decision making.

With its characteristic storing data by column rather than by row in storage so that column-stores can be more effective and efficient in query performance.

**Keywords:** column-stores database, row-stores database, performance, DBMS