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PERFORMANCE COMPARISON OF POPULAR RDBMS

The article discusses the comparison of the productivity of popular RDBMS. Popular RDBMS are used for comparison.

Key words: RDBMS, database, read operation

Fig.: 1. Bibl.: 1.

Target setting. Due to the growing demand for RDBMS. The analysis of popular RDBMS has become a hot topic in recent years.

Actual scientific researches and issues analysis. In connection with the invention of new methods and approaches in the field of databases, the topic of choosing an appropriate RDBMS has become more studied.

Uninvestigated parts of general matters defining. Despite a significant number of works devoted to comparing the productivity of popular RDBMS, the problem remains poorly understood. Therefore, this work is focused on comparing popular RDBMS in many ways.

The research objective. The purpose of this article is to compare the performance of popular RDBMSs. As a solution, the article will focus on the parameters for reading records.

The statement of basic materials. You can build ratings in different ways, in some cases the ratings are based on user surveys, in some cases you can estimate the number of copies sold. In some cases, you can estimate the cash equivalent of sales.

But no matter what rating you take, in any case you will see at the top of the list those DBMS. These are Oracle, Microsoft SQL Server, PostgreSQL and MySQL. [1]

General model structure.

Let's start with a system called Oracle database from the company of the same name. Oracle was founded in 1977. And it was she who launched the first commercially available DBMS, because the existing DBMSs were only research in nature. I must say that the DBMS market is now about \$ 30 billion. This company provides about 46% of the market for modern databases.

The next product to mention is SQL Server from Microsoft, which is the market leader in all software in the world. It is based on a software product developed together with Sybase. The first product was produced in 1988. Unlike other multi-platform databases, Microsoft's SQL Server runs on the Windows operating system, and SQL

Server owns 53% of the market, but the overall market share of this software is less than 20%. Microsoft has announced the release of the first version, which runs on the Linux operating system since 2017.

PostgreSQL is a free, open-source software product. The first version was developed at the University of California, Berkeley. At the moment, this database is supported by a team of enthusiasts.

The MySQL database has the same basis, it is a database management system that is freely distributed, it is supported by Oracle. This database can be a good basis for developing small and medium-sized applications.

Experiments.

Below is a graph that describes the relationship between the time of the read operation and the number of records. (Fig. 1) It can be concluded that in the read operation, Oracle and PostgreSQL are more productive.

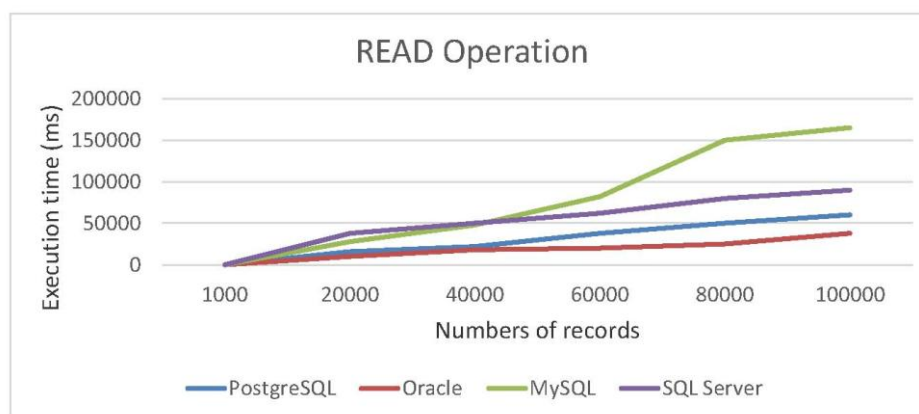


Fig.1. The relationship between the time of the read operation and the number of records

Conclusions. The paper demonstrates a comparison of the productivity of popular RDBMS. It's clear that. A comparative characteristic has been developed that makes it possible to choose an RDBMS depending on the required parameters.

There are several areas for future work. One is to compare DBMSs that have the properties of consistency and partition tolerance, as well as availability and partition tolerance. Another direction is to increase the number of RDBMS comparison characteristics to give a better analysis.

References

1. C.J.Date (2005). An Introduction to Database Systems. (p. 75).

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