Technical Paper: An Analysis of Database Performance using VPS Server

Introduction

This technical paper presents a performance comparison of Inery, with other popular databases: MySql, Postgres, Mongo, Redis, together with Inery, by testing their response times on a VPS server with the following specifications: 120 GB disk space, 6 GB memory, and 4 vCPUs. The test results show the time taken to select 100000, 200000, 500000, and 1000000 rows from each database, with a focus on Inery's performance. The results are presented in a table for easy comparison.

The performance of databases is critical to the smooth functioning of modern software systems. The performance results were collected by selecting data sets with 100000, 200000, 500000, and 1000000 rows.

It's worth noting that despite its slower performance compared to other databases, Inery is designed to prioritize data security and protection. Inery is a decentralized blockchain database that prevents data from being lost or altered. This trade-off in performance for security and protection is a key consideration for organizations that prioritize their data security needs.

Analysis of Results

The results of the performance tests indicate that the Inery database is slower than the other databases in terms of response time. This can be attributed to the fact that Inery is a decentralized blockchain database, which prioritizes security and protection of the data over performance. While this slower performance may seem disadvantageous, it provides an added layer of security to the data by preventing unauthorized access, loss or alteration of data.

Table below summarizes the response times of the five databases when tested with various data sets.

Database	100.000 rows (seconds)	200.000 rows (seconds)	500.000 rows (seconds)	1.000.000 rows (seconds)
MySql	0.2528	0.4738	1.1869	2.3681
Postgres	0.2018	0.4413	0.9732	1.9828
Mongo	0.00009274	0.00001740	0.00000858	0.00000763
Redis	8.93	18.90	44.13	89.62
Inery	2.8451	5.7378	13.6096	28.0606

Conclusion

In conclusion, the performance results indicate that Inery is slower than the other databases in terms of response time. However, this slower performance is a result of its decentralized architecture, which provides an extra layer of security to the data by preventing unauthorized access, loss, or alteration of data. This trade-off between performance and security makes Inery an attractive option for applications that require a secure and protected database solution.