

DATABASE LINEAR SCALABILITY AND HIGH AVAILABILITY WITH MAINTAINING A SYSTEM PERFORMANCE

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***Abstract:** Every day increases the amount of data that is stored in data management systems (DBMS), which leads to the development of new solutions in order to bid farewell to the needs dictated by Big Data. Distributed systems are existing methods for storing large amounts of data to a new generation of web applications used by large corporations like Google, Amazon, Facebook, Twitter, Yahoo, etc. The need for very low-latency, linear scalability, global data distribution, constant availability and reduced operational and software costs led to the categories of NoSQL databases. Apache Cassandra falls into this category and is an open system for database management, designed to handle large amounts of data, which provides continuous availability, linear performance and easy distribution of data in multiple data centers. This paper gives an overview of Apache Cassandra on the part that is essential for distributed DBMS in the business system, provides a paradigm where it is used by large internet companies, characteristics, available tools and ongoing research to improve performance.*

Keywords: NoSQL database, scalability, availability, model, security