

The Data Migration Techniques from SQL Database

Roshan Chitrakar*

Department of computer applications, Nepal Open University, Nepal

*Corresponding author: Roshan Chitrakar, Department of computer applications, Nepal Open University, Nepal, E-mail: roshan_ch@gmail.com

Received date: January 26, 2022, Manuscript No. IPMCR-22-13134; **Editor assigned date:** January 28, 2022, PreQC No. IPMCR-22-13134 (PQ); **Reviewed date:** February 11, 2022, QC No. IPMCR-22-13134; **Revised date:** February 16, 2022, Manuscript No. IPMCR-22-13134 (R); **Published date:** February 23, 2022, DOI: 10.36648/2349-3917.10.2.136

Citation: Chitrakar R (2022) The Data Migration Techniques from SQL Database. Am J Compt Sci Inform Technol Vol.10 No.2: 136

Description

With rapid-fire and multi-dimensional growth of data, Relational Database Management System (RDBMS) having Structured Query Language (SQL) support is facing difficulties in managing huge data due to lack of dynamic data model, performance and scalability issues etc. NoSQL database addresses these issues by furnishing the features that SQL database lacks. So, numerous associations are migrating from SQL to NoSQL. RDBMS database deals with structured data and NoSQL database with structured, unshaped and semi-structured data. As the nonstop development of operations is taking place, a huge volume of data collected has formerly been taken for architectural migration from SQL database to NoSQL database. Since NoSQL is arising and evolving technology in the field of database operation and because of increased maturity of NoSQL database technology, numerous operations have formerly switched to NoSQL so that rooting information from big data. This study discusses, analyzes and compares 7 (seven) different ways of data migration from SQL database to NoSQL database. The migration is performed by using appropriated tools/ fabrics available for each fashion and the results are estimated, anatomized and validated using a system tool called SysGauge. The parameters used for the analysis and the comparison are Speed, Prosecution Time, Maximum CPU Operation and Maximum Memory Operation. At the end of the entire work, the most effective ways have been recommended.

Data Migration

In 1970, Edgar Frank Code has introduced architectural frame on the relational database approach in his paper: "A relational model of data for large participated data banks". After some time Code has introduced Structured English Query Language and latterly has renamed it as Structured Query Language to give a way to pierce data in a relational database. Since also, relational model has had dominant form in the databasemarket. The most popularly has used database operation systems are Oracle, Microsoft SQL garcon and MySQL. All these three DBMS are grounded on relational database model and use SQL as query language. When NoSQL database has been introduced by Carlo Stress in 1998 as a train grounded database, it has been used to represent relational database without using Structured Query Language. Still, it has not been suitable to contend with relational database. Latterly Eric Evans

an hand in Rackspace Company explained the ambition of the NoSQL movement as a new trend to break a problem that Relational Databases aren't fit. The adding operation of NoSQL products have amped other companies to develop their own results and headed to crop of general NoSQL database systems. This way there are further than 150 NoSQL products. These products come with issues like felicity to some areas of operation, security and trust ability. NoSQL databases are arising from last many times due to its lower constrained structure, scalable schema design, and briskly access in comparison to relational databases. The crucial attributes that make it different from relational database are that it doesn't use the table as storehouse structure of the data. In addition, its schema is veritably effective in handling the unshaped data. NoSQL database also uses numerous modeling ways like crucial- value stores, document data model, and graph databases.

NoSQL DBMSs are distributed, on-relational databases. They're designed for large-scale data storehouse and for massive resembling data processing across a large number of commodity waiters. They use non-SQL languages and mechanisms to interact with data. Use of NoSQL database systems in database operation increased in major Internet companies, similar as Google, Amazon, and Facebook; which has aroused challenges in dealing with huge amounts of data with conventional RDBMS results couldn't manage. These systems can support multiple conditioning, including exploratory and prophetic analytics, ETL-style data metamorphosis, and on-mission critical OLTP. These systems are designed so as to gauge up thousands or millions of druggies doing updates as well as reads, in discrepancy to traditional DBMSs and data storages.

Scope and Limitations of the Study

The focus of the study is to get relative study on different seven ways to resettle data from relational database to NoSQL database. Migration of data from relational database to NoSQL database refers the metamorphosis of data from structured and regularized database to flexible, scalable and less constrained structure NoSQL database. The main ideal of this exploration is to find out the most effective data migration fashion among seven major migration ways from SQL database to NoSQL database.

Compass and limitation of this exploration covers the following This study is concentrated to get anatomized with

different ways to resettle the data from SQL database to NoSQL database to know effective migration fashion so that one can efficiently acclimatize arising technology in the database world. Thus, the study doesn't include specialized discussion of the pitfalls linked or of the perpetration guideline then. The demand for NoSQL databases is adding because of their diversified characteristics that offer rapid-fire, smooth, scalability, great vacuity, distributed armature, significant performance and rapid-fire development dexterity. It provides a wide range of data

models to choose from and is fluently scalable where database directors aren't needed. Some of the SQL to NOSQL data migrating providers like Risk and Cassandra are programmed to handle tackle failures and are briskly, more effective and flexible. It has evolved at a veritably high pace. Still, some data migration ways and NoSQL is still immature and they don't have standard query language. Some NoSQL databases aren't ACID biddable. No standard and data loss are the major problems while migrating data from SQL database to NoSQL database.