

What is NoSQL?

NoSQL, popularly misunderstood as No-SQL but it actually means **Not only SQL database**. It's a mechanism for storing and retrieving data and is also claimed as the next generation database. They are used in real-time web applications and big data and their usage is peaking over time.

Earlier databases weren't compatible with the scale and agility of modern applications, nor were they able to optimally use commodity storage and processing power which is available today. They, with time, weren't able to catch up with the flow of information demanded by people.

Hence, to cope up with all the parameters, in mid 1990's a non-relational database named NoSql was introduced.

- These are schema free
- Data structure being used for it is different from what we learned in Relational databases, data structures used here are more flexible than the relation used in relational databases.
- It can handle huge amounts of data (big data) and it's performance can be tuned by adding more machines to our clusters.
- Most of the NoSQL are open source and have a capability of horizontal scalability which means that commodity kinds of machines could be added.

Why NoSQL?

The Relational Databases we use are not designed to manage all kinds of data efficiently, like structured, unstructured and semi-structured data whereas NoSQL databases are designed to manage these types of data efficiently.

NoSQL databases go against the conventional attitude of storing information at a single location, instead it distributes and stores information over a set of multiple servers. The data are stored in flexible and fluid data models. This distribution of data helps the NoSQL database server to distribute the load at the database tier therefore it also signifies that the system can scale out rather than just scale up.