

Limitations

SQL RDBMS

Requires vertical scaling
Joins have bad time complexity
Linear translation + chk for rows association

Horizontal Scaling

One like to store the entire db on one machine to chk constraints
Unique

Network request (CPU-CPU link)
Is required if parallel storage
In SQL

Unbounded nature of QUERIES

$O(n)$ complexity for any query
The entire db is searched
Bad with high volume of data

NO-SQL

SOLUTION

Joins are denormalizing
storage efficiency
Duplication
Cheap storage

Instead of using it explicitly;
Embed reused info with the parent info. → Requires PLANNING.

Split data with hashed keys.

Key: Tree with many nodes
Child

SCALING

B-Tree (with multiple nodes) \rightarrow Like a graph structure

\rightarrow Supports - Parallel sharing + Bounding
(0 (1) operations)

\rightarrow Segments data into nodes with key having info of clusters

\rightarrow EN \rightarrow Parallel computing

$N_i \rightarrow$ Bounding

