Web Development

NoSQL databases

The following major types of NoSQL databases are available:

- Key-Value
- Document
- Columnar
- Graph

These databases have unique characteristics that make them well-suited for different types of applications or parts of applications.

Key-Value

Key-Value databases are the least complex of the NoSQL databases. All data that is stored with a key and an associated value blob. Key-Value stores are represented

However, these databases often are not meant for complex queries that are attempting to connect multiple pieces of data. Instead, they are suited only to situations in which you always access data by using only a single key. Some popular Key-Value databases are Redis, Hamster DB, DynamoDB, and Berkely DB.

Document

Document databases build off the Key-Value model by making the value visible and can be queried. Each piece of data is considered a document and often is stored in JSON or XML format. Document databases can index and query the contents of the documents, which offers key and value range lookups and search ability, or analytical queries by using paradigms, such as MapReduce.

Document databases are currently the most popular of the NoSQL databases in use today. Some popular Document databases include Cloudant, MongoDB, and CouchDB.

Columnar

Columnar databases focus on columns and groups of columns when storing and accessing data. When compared to row-oriented databases, columnar databases can better compress data and save storage space. Some popular columnar databases include dashDB and Cassandra.

Graph databases store information in entities (or nodes) and relationships (or edges). Graph databases are useful when your data set resembles a graph-like data structure. Traversing all of the relationships is quick and efficient, but these databases tend not to scale well. Some popular Graph databases include Neo4j, OrientDB, and FlockDB.