Differences between NoSQL and NewSQL

Distributed Database Management System

1. Strategy
2. Replication types
3. Benefits
4. What is being distributed?
5. CAP Theorem

Which data store should one use depending on the characteristics of a given application?

Data Lake vs. Data Warehouse?

Hadoop

1. What is it?
2. What are its components? What do they mean?
3. To which DB paradigm is Hadoop associated to?
4. HDFS

MongoDB

1. What is it?
2. Data Model
3. Query Language
4. How is data stored? (Data storage)
5. Distributed Model
6. Faul-tolerance
7. Advantages/Disadvantages

In-Memory DBs

In-Column DBs

NoSQL databases (Not only SQL)

1. What are they?
2. Advantages/Disadvantages
3. Types of NoSQL databases
   1. Key-Pair
   2. Graph
   3. Etc.

NewSQL databases

1. What are they?
2. Advantages/Disadvantages
3. Types of NoSQL databases

Distributed Databases

Concepts

Architectures

Challenges with distribution

Protocols

Sync types

Replication styles

CAP Theorem

Advantages/Disadvantages

Horizontal/Vertical Scalability

NoSQL/NewSQL Database

Concepts

Architectures

Challenges with distribution

Protocols

Sync types

Replication styles

Advantages/Disadvantages

In-Memory DBs

In-Column DBS

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Big Data

Architectures

Hadoop

What is it?

What are its components? What do they mean?

To which DB paradigm is Hadoop associated to?

HDFS

File System

Distributed Processing mechanisms

i. Map/Reduce

Storage Systems

Parallel Systems

Data Lake

Data Warehouse

Roles, Responsibilities & Standard Procedures

RDBMS SQL Query Processing & Optimization

RDBMS SQL Physical Storage

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