Where should I store my data?

This overview aims to contrast weakly structured data lakes with traditional relational data warehouses. Contemporary information systems are placed on a map ranging from cold, infrequently accessed data to warm, regularly queried data up to hot, business-critical data that is always kept in memory. Many modern solutions are built to span multiple temperature zones and attempt to offer a structured relational interface that abstracts from the underlying heterogeneity.

**Apache Flink**
This stream processing framework is commonly used for real-time analysis and data warehouse preprocessing.

**Data Lakes**
Enterprises will store all collected and produced data from database entries to text, images and video in massive data lakes that require little to no preprocessing and come at a cheaper price point than data warehouses.

**Apache Hadoop**
This commodity-cluster optimized pairing of HDFS and MapReduce is a widely adopted base for data mining applications.

**Data Warehouses**
Relational data warehouses integrate data from multiple sources to facilitate online analytical processing (OLAP). This enables data-driven decision making.

**Amazon Redshift (Spectrum)**
Redshift is a relational data warehouse cloud service based on PostgreSQL. Redshift Spectrum allows to query Amazon S3 data lakes with SQL to simplify the analysis of weakly structured data sets.

**Tableau**
Even in the times of automated decision making, visualization software is still necessary for exploration of unknown data sets and support of complex strategic decisions.

References


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