

To choose the best **DBMS** for your data repository, consider these factors:

1 Data Type

- **Structured (Relational)** → Use **SQL databases** (PostgreSQL, MySQL, SQL Server).
- **Unstructured/Semi-structured** → Use **NoSQL** (MongoDB, Cassandra, Elasticsearch).

2 Data Repository Type

- **Data Lake** → Hadoop, Amazon S3, Google Cloud Storage.
- **Data Warehouse** → Snowflake, Amazon Redshift, Google BigQuery.
- **Data Mart** → Same as a data warehouse but department-focused (e.g., Redshift, PostgreSQL).

3 Scalability & Performance

- **High volume & real-time analytics?** → NoSQL (Cassandra, Elasticsearch).
- **High-speed queries for BI?** → OLAP databases (Redshift, BigQuery).

4 Budget & Cloud vs. On-Prem

- **Cloud-based & scalable?** → AWS, GCP, Azure.
- **Self-hosted & cost-effective?** → PostgreSQL, MySQL, or MariaDB.