

Prepare a 5–10 slide deck that discusses the following aspects of data mart and warehouse data modeling:

Apache Hadoop File System (HDFS) Architecture Guide (Links to an external site.)

Amazon Web Services (AWS) (Links to an external site.)

Microsoft Azure Services

- HDFS is a distributed file system that handles large data sets running on commodity hardware. It is used to scale a single Apache Hadoop cluster to hundreds (and even thousands) of nodes. HDFS is one of the major components of Apache Hadoop, the others being MapReduce and YARN.
- If you have clean, consistent and high-quality data then you should go for Data Warehouse because Hadoop lacks data quality in some of its solutions.
- If you have Raw Unstructured Data, then you should go for Hadoop because Hadoop works well with unstructured/raw data but Data Warehouse works only with structured data.

- For Low Latency and Interactive Reports, you should go for Data Warehouse
- For OLTP/Real-time/ Point Queries you should go for Data Warehouse because Hadoop works well with batch data.
- For large volume data sets, you should go for Hadoop because Hadoop is designed to solve Big data problems.

- Amazon Web Services offers a broad set of global cloud-based products including compute, storage, databases, analytics, networking, mobile, developer tools, management tools, IoT, security and enterprise applications. These services help organizations move faster, lower IT costs, and scale.
- Amazon Redshift allows you to deploy a scalable data warehouse in a matter of minutes and start to analyze your data right away using your existing business intelligence tools. It's a fast, fully-managed, and cost-effective data warehousing system.
- AWS offers a broad set of managed services that integrate seamlessly with each other so that you can quickly deploy an end-to-end analytics and data warehousing solution.

- Azure SQL Data Warehouse is a cloud based data warehouse that enables in creating and delivering a data warehouse. Azure Data Warehouse is capable of processing large volumes of relational and non-relational data. It provides SQL data warehouse capabilities on top of a cloud computing platform.
- Microsoft has introduced Azure SQL Data Warehouse that has come as a permanent and effective product in the data platform ecosystem. Microsoft's Azure SQL Data Warehouse is a highly elastic and scalable cloud service.

- Azure SQL Data Warehouse is designed for data analytics performance when working with massive amounts of data. It can do this because of its MPP architecture. This means that a query is processed by a dedicated node that has its own CPU and Memory.

- <https://www.educba.com/data-warehouse-vs-hadoop/>