



Parquet

Overview

Apache Parquet is a columnar storage format available to any project in the Hadoop ecosystem, regardless of the choice of data processing framework, data model or programming language.

Concepts

Glossary of relevant terminology.

- *Block (HDFS block)*: This means a block in HDFS and the meaning is unchanged for describing this file format. The file format is designed to work well on top of HDFS.
- *File*: A HDFS file that must include the metadata for the file. It does not need to actually contain the data.
- *Row group*: A logical horizontal partitioning of the data into rows. There is no physical structure that is guaranteed for a row group. A row group consists of a column chunk for each column in the dataset.
- *Column chunk*: A chunk of the data for a particular column. They live in a particular row group and are guaranteed to be contiguous in the file.
- *Page*: Column chunks are divided up into pages. A page is conceptually an indivisible unit (in terms of compression and encoding). There can be multiple page types which are interleaved in a column chunk.

Hierarchically, a file consists of one or more row groups. A row group contains exactly one column chunk per column. Column chunks contain one or more pages.

Unit of parallelization

- MapReduce - File/Row Group
- IO - Column chunk
- Encoding/Compression - Page