# HDFS

Kristo Raun

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UNIVERSITY OF TARTU

# What is HDFS?

- The Hadoop Distributed File System (HDFS) is a distributed file system designed to run on commodity hardware.

- Source: https://hadoop.apache.org/docs/current/hadoop-project-dist/hadoop-hdfs/HdfsDesign.html

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- HDFS is highly fault-tolerant and is designed to be deployed on low-cost hardware.

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- HDFS is highly fault-tolerant and is designed to be deployed on low-cost hardware.
- HDFS provides high throughput access to application data and is suitable for applications that have large data sets.

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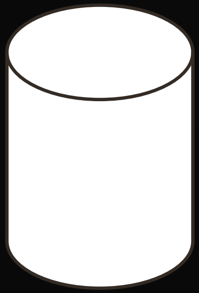
# History of Hadoop



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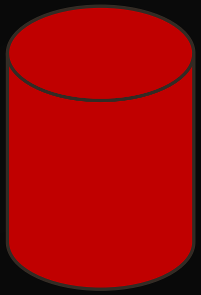

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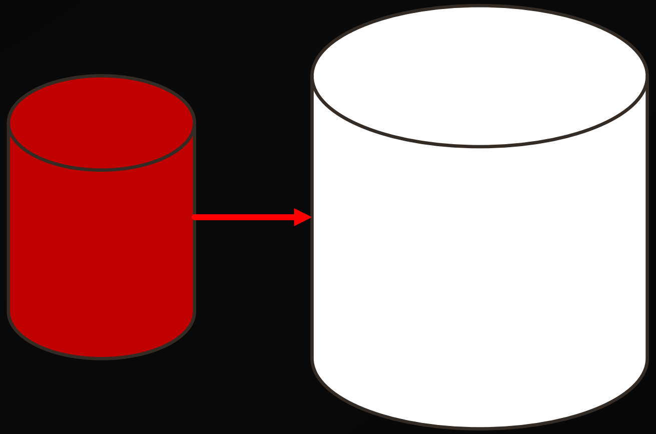

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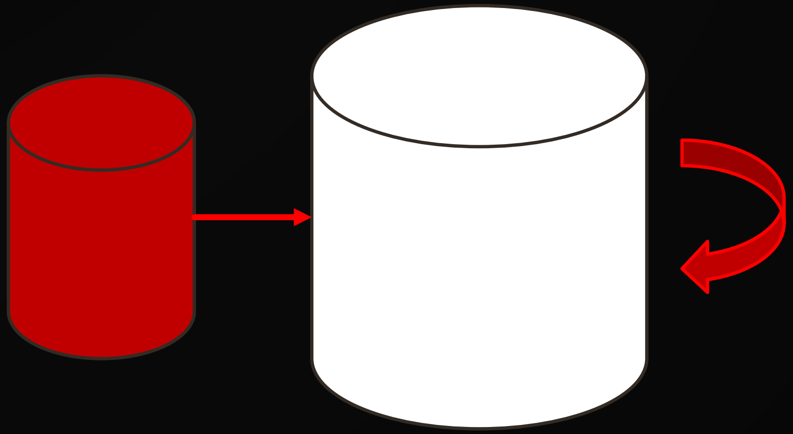

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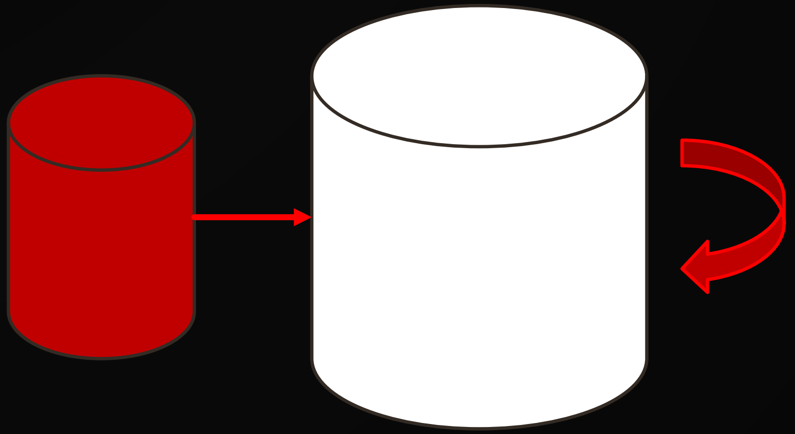

- Difficult to scale (storage and compute)
- Pre-cloud (...-~2006)

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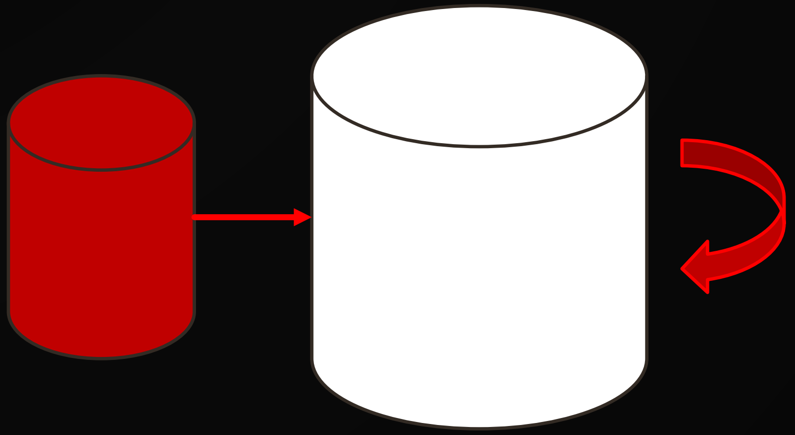

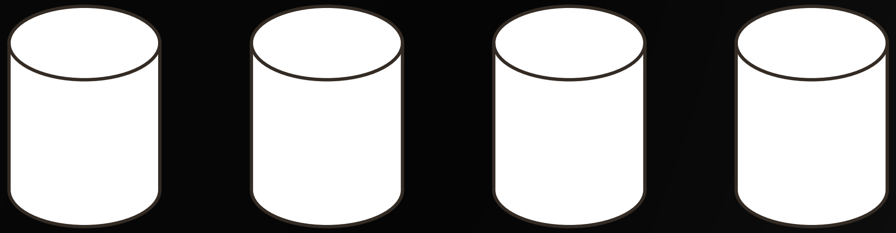

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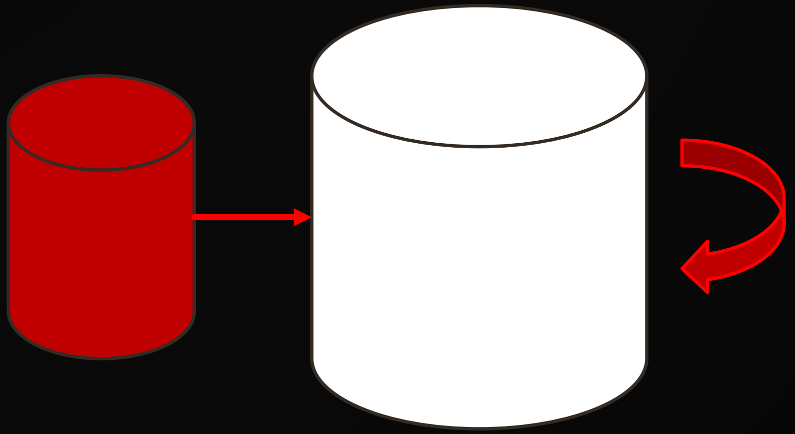

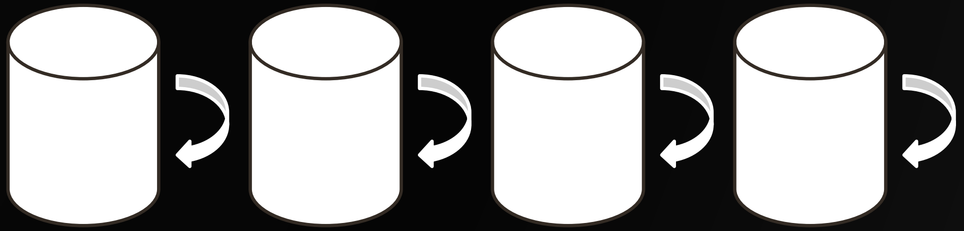

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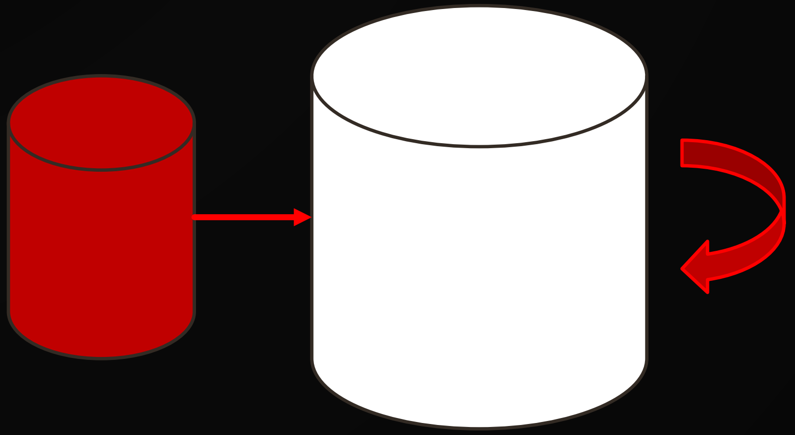

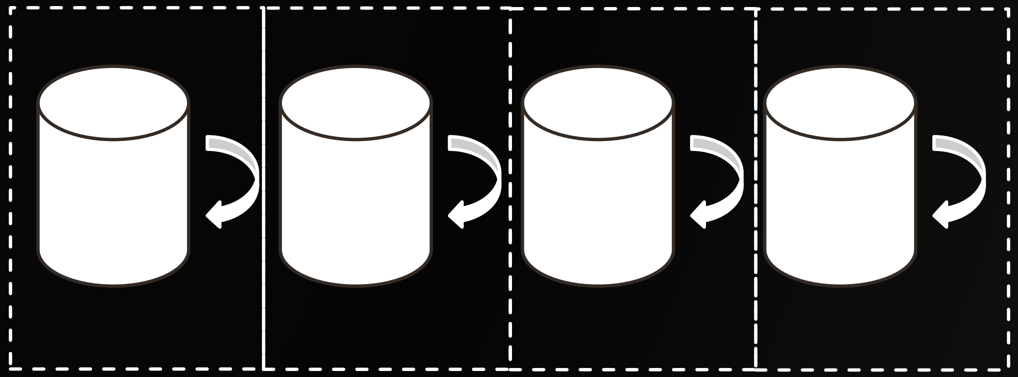

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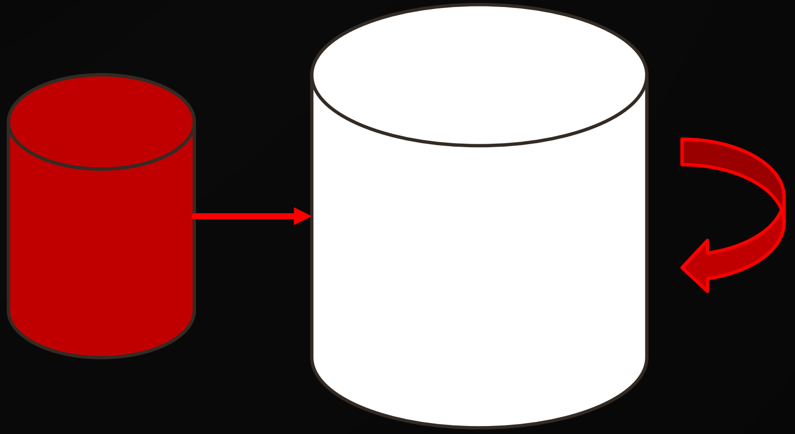

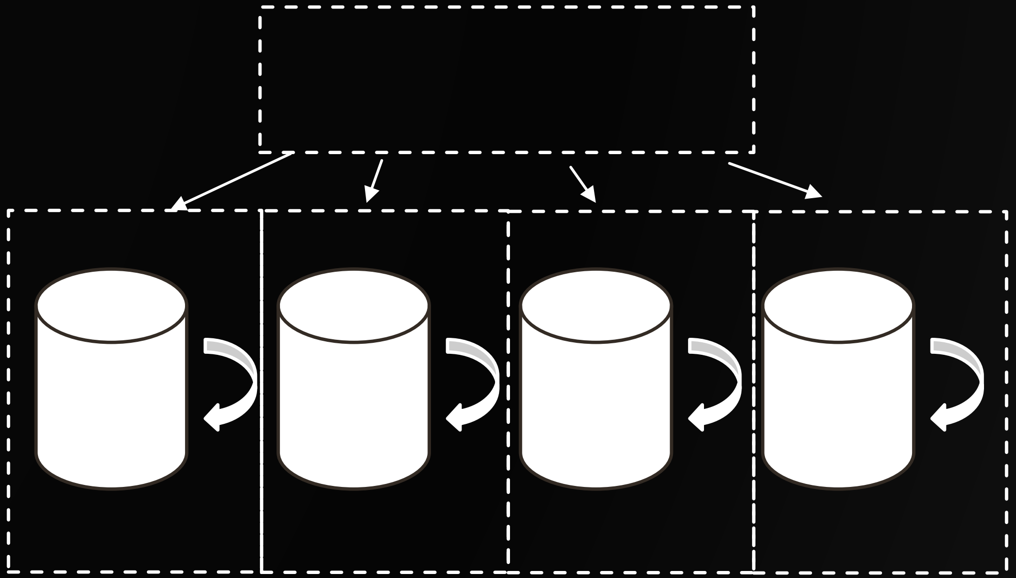

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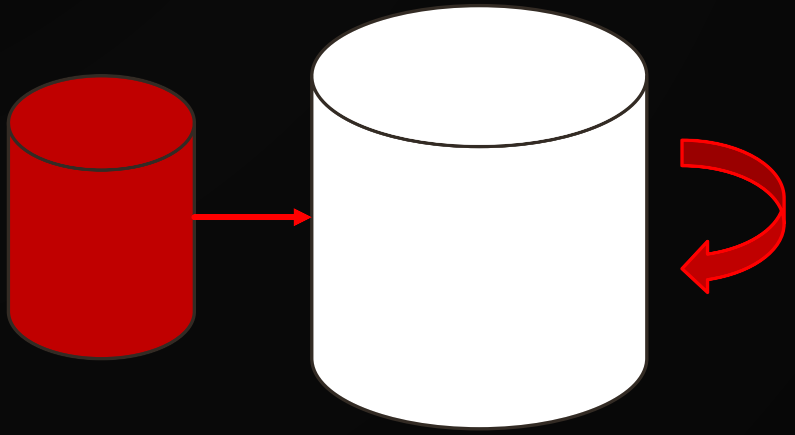

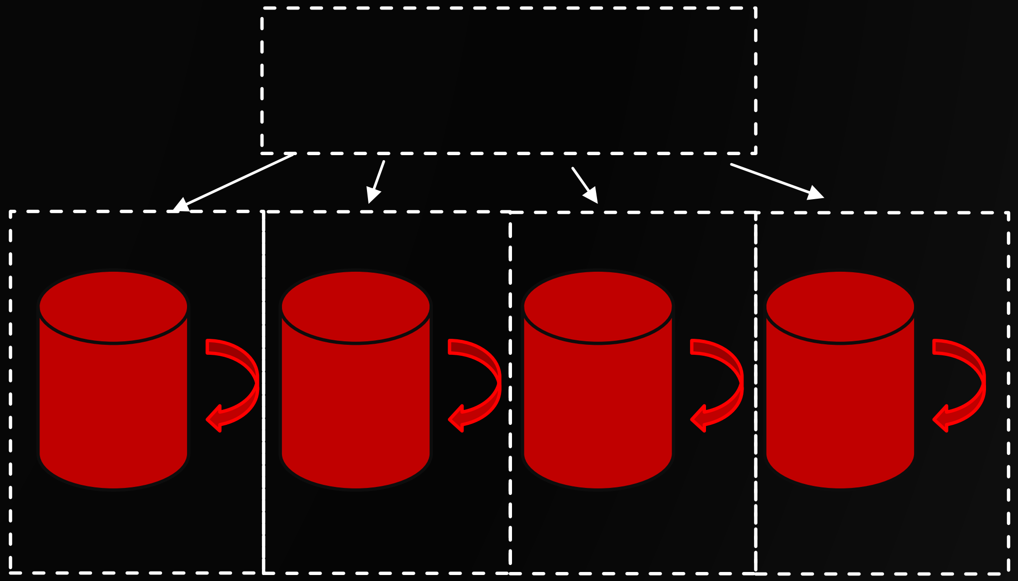

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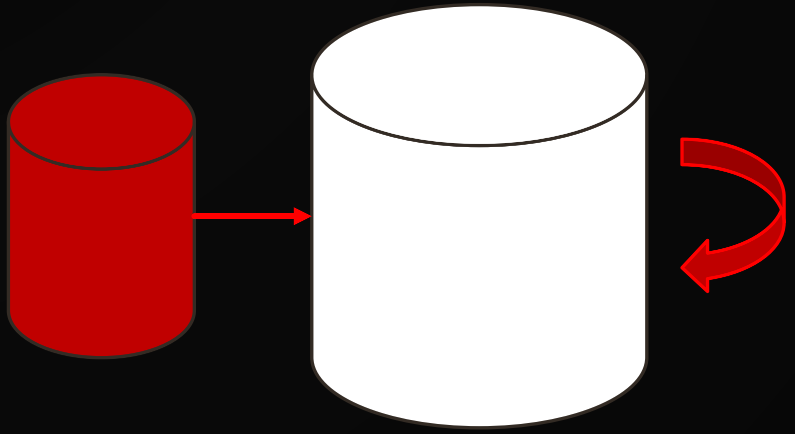

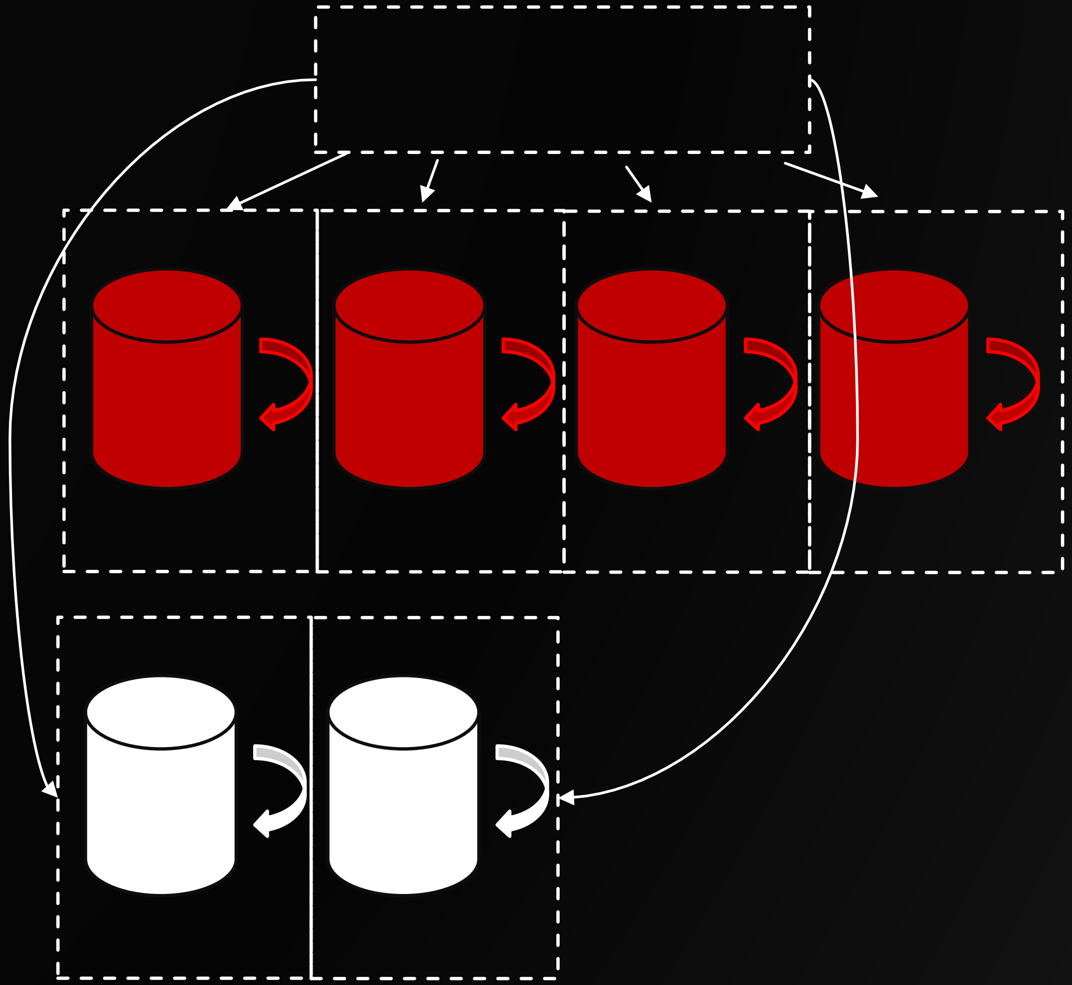

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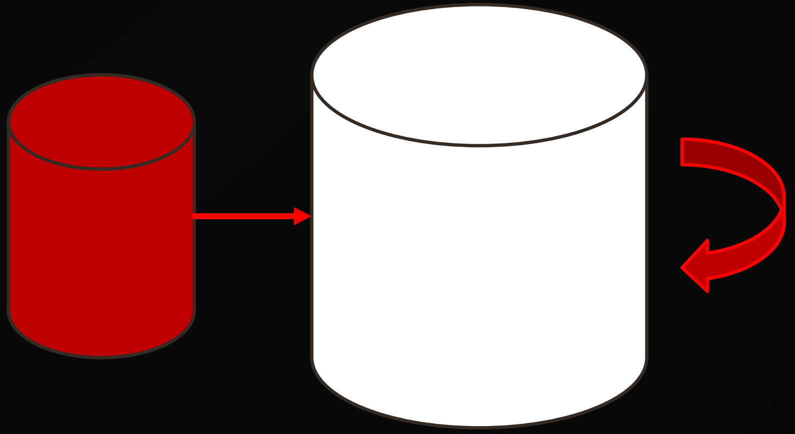

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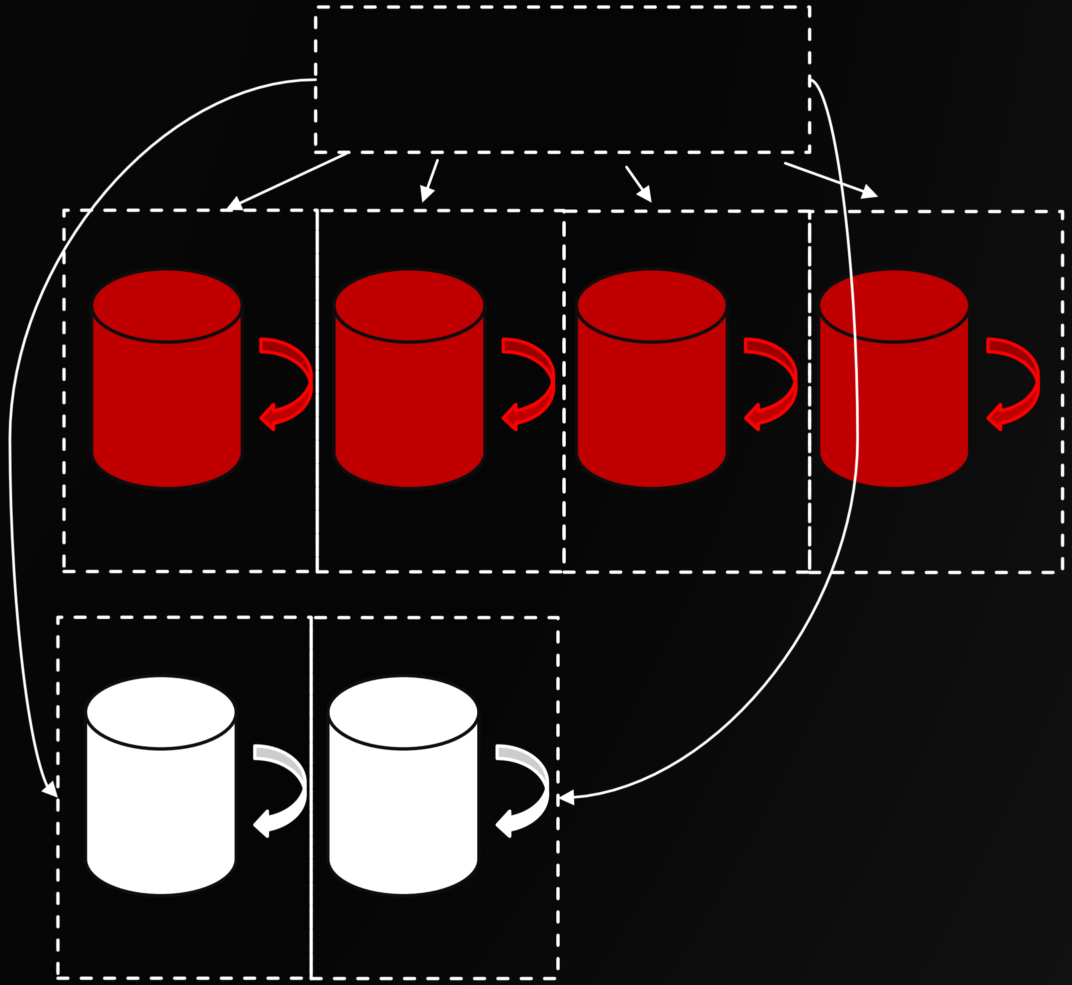

The Google File System (2003)

MapReduce: Simplified Data Processing on Large Clusters (2004)

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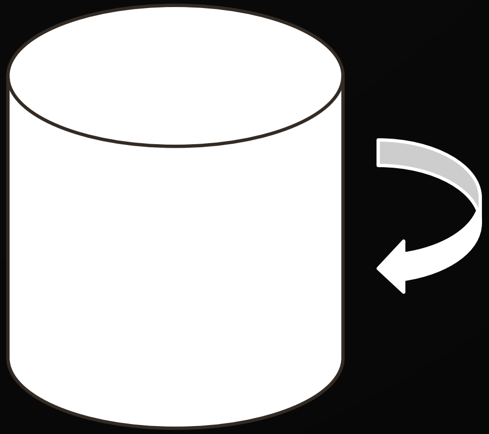

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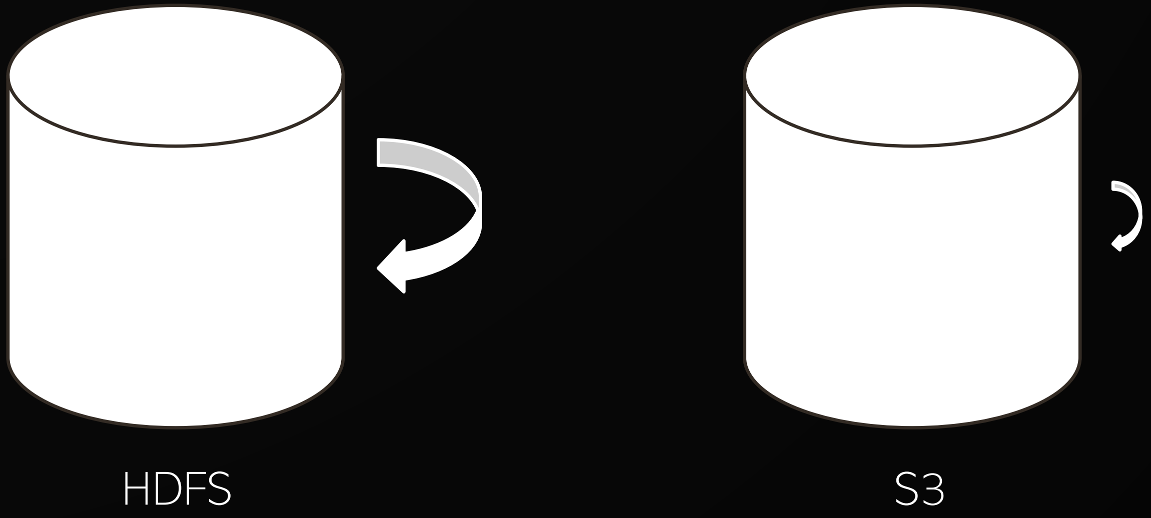

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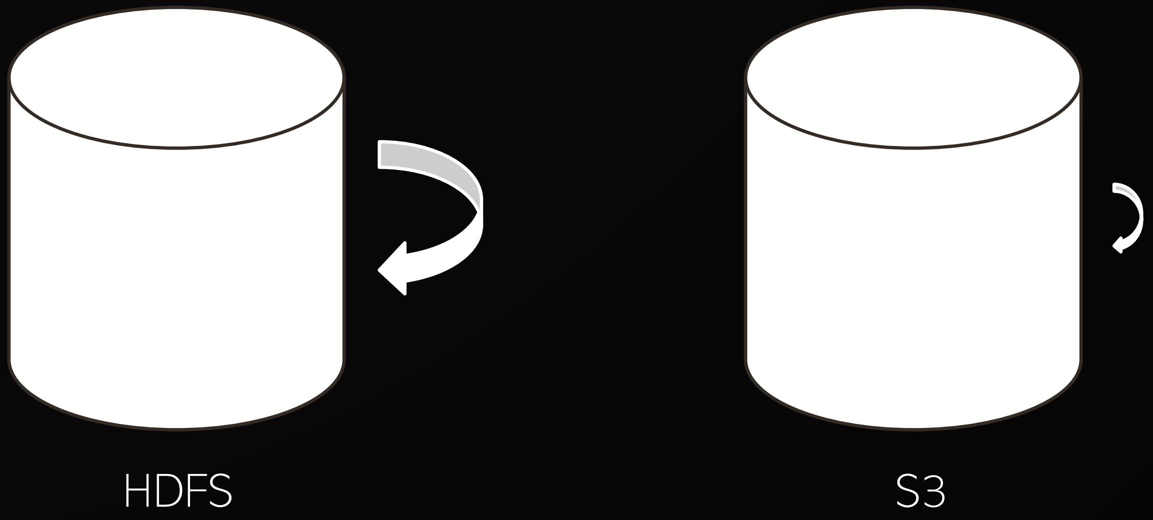

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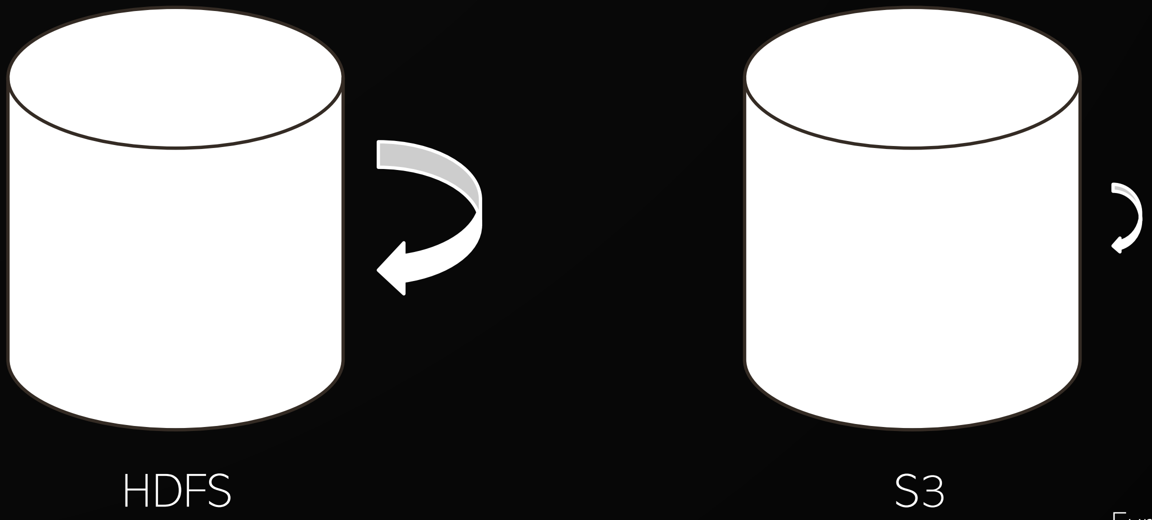

S3: more focused on storage

Further reading:
https://jonascleveland.com/hdfs-vs-s3/
https://www.databricks.com/blog/2017/05/31/top-5-reasons-for-choosing-s3-over-hdfs.html