

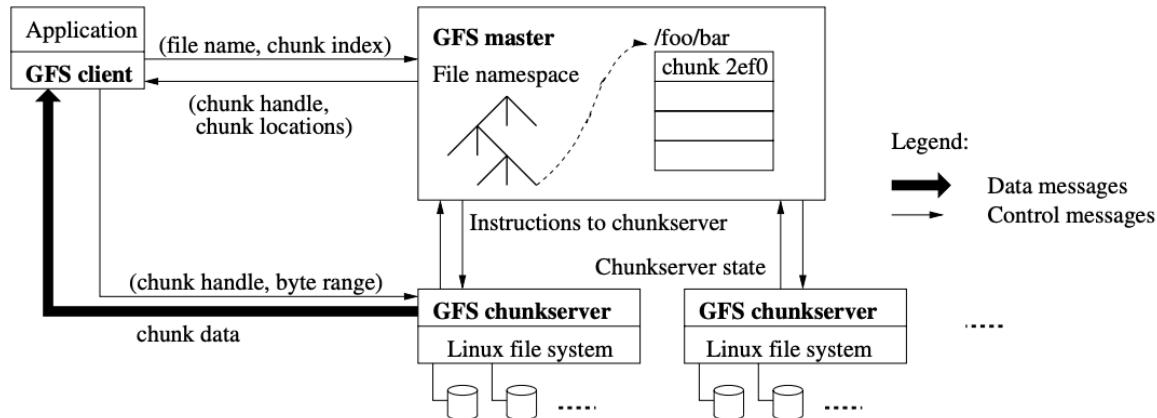
## Tutorial 10: Distributed File Systems

### Question Set

**Q1.** What are the desirable features of Distributed File System (DFS)?

**Q2.** What is a Clustered File System? Please use one sentence to answer this question.

**Q3.** Read the following materials [1] and describe each step in READ and WRITE operations in Google File System (GFS).



**Figure 1: GFS Architecture**

**Q4.** Please compare the differences between Google File System (GFS) and Hadoop Distributed File System (HDFS) [2].

### References

[1] Ghemawat, S.; Gobioff, H.; Leung, S. T. (2003). The Google file system, Proceedings of the nineteenth ACM Symposium on Operating Systems Principles - SOSP'03, October 19–22, Bolton Landing, New York, USA.

(<http://static.googleusercontent.com/media/research.google.com/en//archive/gfs-sosp2003.pdf>)

[2] Shvachko, Konstantin, et al. "The hadoop distributed file system." 2010 IEEE 26th symposium on mass storage systems and technologies (MSST). IEEE, 2010.