Client Server Implementation

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Abstract*: Recovery and Backup system in which the process involves that copying and archiving of data on different cloud server, so that this data is used to recover the unique data, afterward a loss event. Purpose of backup is to recover data after its loss and to improve data from a past time. In the existing system, data replication has been used as the ultimate solution to improve data availability and reduce access time. This systems usually need to migrate and create a large number of data replicas over time between and within data centers, incurring a large overhead in terms of network load and availability. In proposed systems, the fragments of every data file are physically distributed over multiple servers, which increase privacy of data files. We can use deduplication compressions techniques, but there is a need to improve such systems with respect to capacity of storage and to improve recovery of files. In this paper, we implement the erasure code, inline de-duplication checking and file restoring to improve the performance of backup system.*

Keywords: Recovery and Backup

REFERENCES AND BIBLIOGRAPHY

[1] Amina Mseddi, Mohammad A. Salahuddin, Mohamed FatenZhani, Halima Elbiaze, Roch H. Glitho, "Efficient Replica Migration Scheme for Distributed Cloud Storage Systems", IEEE 2018.

[2] Yucheng Zhang, Dan Feng, Yu Hua, Yuchong Hu, Wen Xia, Min Fu, Xiaolan Tang, Zhikun Wang, "Reducing Chunk Fragmentation for In-Line Delta Compressed and Deduplicated Backup Systems," 2017 International Conference on Networking, Architecture, and Storage (NAS), Shenzhen, 2017, pp. 1-10.

[3] X. Yang, R. Lu, K. R. Choo, F. Yin and X. Tang, "Achieving Efficient and PrivacyPreserving Cross-Domain Big Data Deduplication in Cloud," in IEEE Transactions on Big Data, 2017. doi: 10.1109/TBDATA.2017.2721444

[4] K. Gai, M. Qiu and H. Zhao, "Privacy-Preserving Data Encryption Strategy for Big Data in Mobile Cloud Computing," in IEEE Transactions on Big Data, 2017

[5] Fu, Min, et al. "Reducing Fragmentation for In-line Deduplication Backup Storage via Exploiting Backup History and Cache Knowledge." IEEE Transactions on Parallel and Distributed Systems 27.3 (2016): 855-868

[6] Li, Jin, et al. "A hybrid cloud approach for secure authorized deduplication."IEEE Transactions on Parallel and Distributed Systems 26.5 (2015): 1206-1216.

[7] X. Lin, G. Lu, F. Douglis, P. Shilane, and G.Wallace, "Migratory compression: Coarse-grained data reordering to improve compressibility," in Proc. USENIX FAST, 2014.

[8] F. Guo and P. Efstathopoulos, "Building a highperformance deduplication system," in Proc. USENIX ATC, 2011.

[9] F. C. Botelho, P. Shilane, N. Garg, andW. Hsu, "Memory efficient sanitization of a deduplicated storage system," in Proc. USENIX FAST, 2013.

[10] Y. Nam, G. Lu, N. Park, W. Xiao, and D. H. Du, "Chunk fragmentation level: An effective indicator for read performance degradation in deduplication storage," in Proc. IEEE HPCC, 2011.

[11] M. Kaczmarczyk, M. Barczynski, W. Kilian, and C. Dubnicki, "Reducing impact of data fragmentation caused by in-line deduplication," in Proc. ACM SYSTOR, 2012. (31)

[12] K. Srinivasan, T. Bisson, G. Goodson, and K. Voruganti, "iDedup: Latency-aware, inline data deduplication for primary storage," in Proc. USENIX FAST, 2012.