INTERNATIONAL JOURNAL OF ADVANCED RESEARCH IN COMPUTER SCIENCE AND ENGINEERING TECHNOLOGIES

ISSN 2454-9924 Volume: 7 Issue: 1(2016)

An Effective and Efficient Idea of Cloud Service Provider using Map-Reduce

Dr. Paulina Vasanthi,
Assistant Professor, Idhaya Arts and Science College,
Pwilson.mba@gmail.com

Abstract-Now days, lot of organizations are mainly depends upon the cloud service providers for outsourcing data. The customers have to pay rent for that storage. The CSP (Cloud Service Provider) is the system for providing cloud to many organizations, industry, etc. For more copies, the CSP ask more cost to store data. In existing work, they implemented a map based scheme for storing data and provides less efficiency and high cost. In this paper, implements a novel concept of CSP with Map-Reduce (MR) concept and ask less cost to store their data. In addition, we also achieve the efficiency towards storing data in cloud.

Keywords: Cloud Service Provider, Storage, Efficiency, Outsourcing.

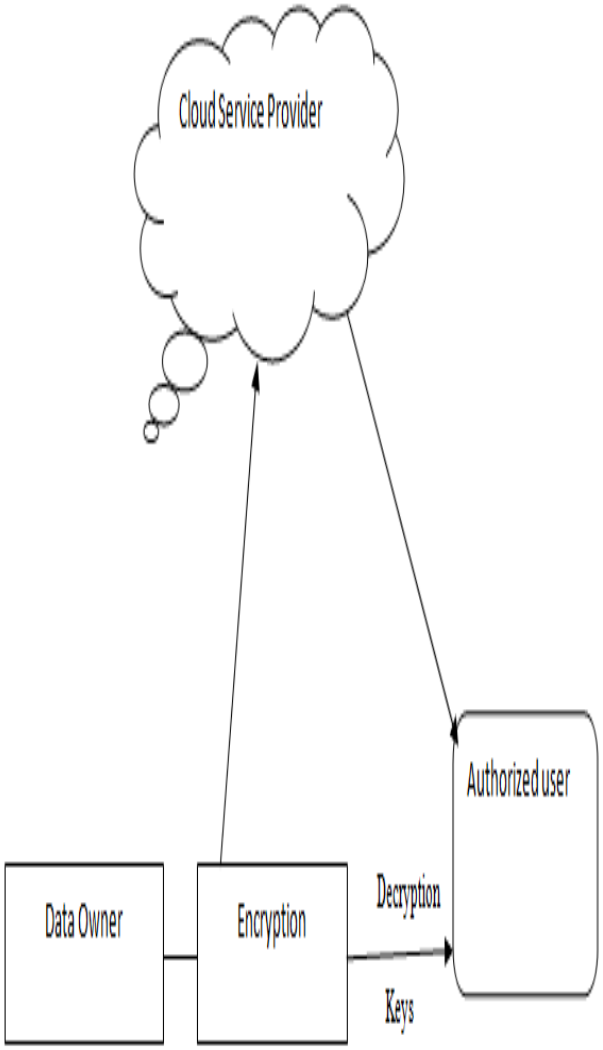
I. Introduction

Cloud computing refers to accessing the user application in online also offers online storing, controlling and accessing of data. Cloud provides many types, they are, and public, private, community and hybrid cloud and provide services are, Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a service (SaaS). The cloud computing has variety of benefits, they are, it offers all services at online only. It does not need any software to access the services. Cloud computing offers many tools, programming aspects through the PaaS and provides many software through SaaS. In existing work, the map based scheme allows the cloud owner to update and scale their copies outsourced to cloud servers which may be untrusted. Cloud Storage is a service where data is remotely maintained, managed, and backed up. The services are available only through online or internet. The cloud service providers make them system as very comfort and efficient and also less in cost.

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH IN COMPUTER SCIENCE AND ENGINEERING TECHNOLOGIES

ISSN 2454-9924 Volume: 7 Issue: 1(2016)

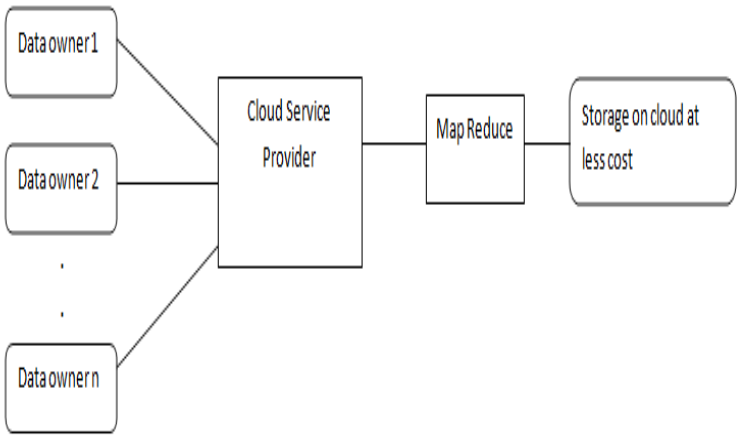
II. An overview structure of Multi copy Cloud Service Provider



From this diagram, the cloud service provider stores the data through security measures. Here the security measures implements via encryption and decryption of data. Here, firstly the data owner, stores the data in the cloud using cloud service provider. In this cloud service provider ask high cost to store data on the cloud. For this reason, the cloud service provider, implements a existing concept of map based storage system.

III. Proposed Approach of Cloud storage using Map and Reduce

3.1. A layout for storing cloud using Map Reduce



From the above diagram, the c loud service provider using a map and reduce algorithm. Map reduce is a programming model for distributed process of data. Map Reduce mainly depends on the map and reduce algorithm. Map Reduce consists of the both job

ISSN 2454-9924 Volume: 7 Issue: 1(2016)

tracker and task tracker. In this map reduce phase, first starts with the input file, input split, record reader, mapper, reducer, record writer and finally provides the reducer outcome of data. Here, consider the word count example to the map reduce phase. First the input file text can be converted according to the size. Then the input split separates the files into blocks. The record reader reads the data from the input split and reads the data through the recycle manner. Mapper maps the data depends on the (key, value) pairs. Reducer combines all the values into associated (key, value) pairs. Shuffling is used to avoid duplicate keys and sorting, which sorts the mapper outcome of data. In this model, the various cloud owners are highly depends upon the cloud service provider. Here the cloud service provider, which uses the map reduce algorithm for reducing storage space also reducing the storage cost.

IV. Literature Review

Provable Multicopy Dynamic Data Possessionin Cloud Computing Systems, Ayad F. Barsoum, Increasingly more and more organizations are opting for outsourcing data to remote cloud service providers (CSPs). Customers can rent the CSPs storage infrastructure to store and retrieve almost unlimited amount of data by paying fees metered in gigabyte/month. For an increased level of scalability, availability, and durability, some customers may want their data to be replicated on multiple servers across multiple data centers. The more copies the CSP is asked to store, the more fees the customers are charged. Therefore, customers need to have a strong guarantee that the CSP is storing all data copies that are agreed upon in the service contract, and all these copies are consistent with the most recent modifications issued by the customers. In this paper, we propose a map-based provable multi copy dynamic data possession (MB-PMDDP) scheme that has the following features: 1) it provides an evidence to the customers that the CSP is not cheating by storing fewer copies; 2) it supports outsourcing of dynamic data, i.e., it supports block-level operations, such as block modification, insertion, deletion, and append; and 3) it allows authorized users to seamlessly access the file copies stored by the CSP. We give a comparative analysis of the proposed MB-PMDDP scheme with a reference model

ISSN 2454-9924 Volume: 7 Issue: 1(2016)

obtained by extending existing provable possession of dynamic single-copy schemes. The theoretical analysis is validated through experimental results on a commercial cloud platform. In addition, we show the security against colluding servers, and discuss how to identify corrupted copies by slightly modifying the proposed scheme.

V. Conclusion

From this, an effective and efficient idea of Cloud service Provider using Map-Reduce, we have implemented and described. In this model, we have implemented a novel approach for storing cloud at less cost using map reduce concept. In future, we also enhance the efficiency of map-reduce.

VI. References

[1] K. D. Bowers, A. Juels, and A. Oprea, "HAIL: A high-availability and integrity layer for cloud storage," in Proc. 16th ACM Conf. Comput. Commun. Secur. (CCS), New York, NY, USA, 2009, pp. 187–198.

[2] C. E. Shannon, "Communication theory of secrecy systems," Bell Syst. Tech. J., vol. 28, no. 4, pp. 656–715, 1949.

[3] D. Boneh, B. Lynn, and H. Shacham, "Short signatures from the Weil pairing," in Proc. 7th Int. Conf. Theory Appl. Cryptol. Inf. Secur. (ASIACRYPT), London, U.K., 2001, pp. 514–532.

[4] G. Ateniese, S. Kamara, and J. Katz, "Proofs of storage from homomorphic identification protocols," in Proc. 15th Int. Conf. Theory Appl. Cryptol. Inf. Secur. (ASIACRYPT), Berlin, Germany, 2009, pp. 319–333.

[5] R. C. Merkle, "Protocols for public key cryptosystems," in Proc. IEEE Symp. Secur. Privacy, Apr. 1980, p. 122.

[6] C. Martel, G. Nuckolls, P. Devanbu, M. Gertz, A. Kwong, and S. G. Stubblebine, "A general model for authenticated data structures," Algorithmica, vol. 39, no. 1, pp. 21–41, Jan. 2004.

[7] P. S. L. M. Barreto and M. Naehrig, Pairing-Friendly Elliptic Curves of Prime Order With Embedding Degree 12, IEEE Standard P1363.3, 2006.

ISSN 2454-9924 Volume: 7 Issue: 1(2016)

[8] Amazon Elastic Compute Cloud (Amazon EC2). [Online]. Available: http://aws.amazon.com/ec2/, accessed Aug. 2013.

[9] Amazon Simple Storage Service (Amazon S3). [Online]. Available: http://aws.amazon.com/s3/, accessed Aug. 2013.

[10] Amazon EC2 Instance Types. [Online]. Available:http://aws.amazon.com/ec2/, accessed Aug. 2013.

[11] P. S. L. M. Barreto and M. Naehrig, "Pairing-friendly elliptic curves of prime order," in Proc. 12th Int. Workshop SAC, 2005, pp. 319–331.

[12] A. L. Ferrara, M. Green, S. Hohenberger, and M. Ø. Pedersen, "Practical short signature batch verification," in Proc. Cryptograph. Track RSA Conf., 2009, pp. 309–324.

[13] A. F. Barsoum and M. A. Hasan. (2011). "On verifying dynamic multiple data copies over cloud servers," IACR Cryptology ePrint Archive, Tech. Rep. 2011/447. [Online]. Available: http://eprint.iacr.org/

[14] Y. Zhu, H. Wang, Z. Hu, G.-J. Ahn, H. Hu, and S. S. Yau, "Efficient provable data possession for hybrid clouds," in Proc. 17th ACM Conf. Comput. Commun. Secur. (CCS), 2010, pp. 756–758.