







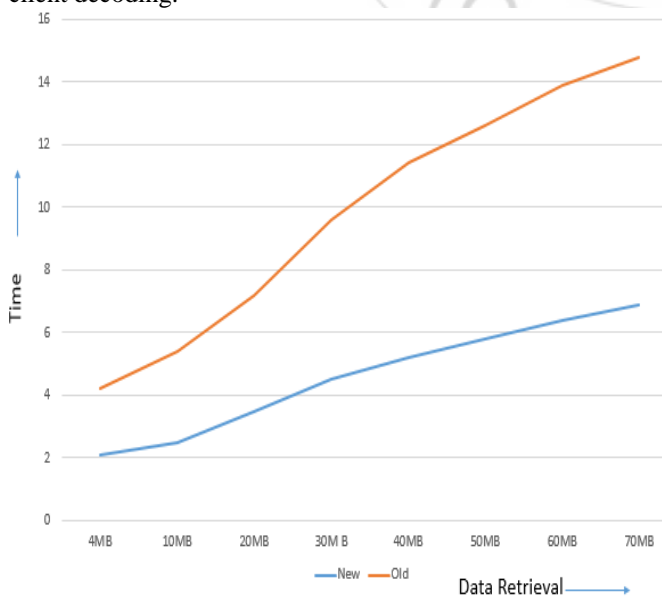


To retrieve file for user, it perform query from the cloud database and select the file to download. On the retrieval process, the cloud partially decrypts the encrypted data for the users and send the intermediate decryption keys to user by using secure SMTP communication. The user subsequently decrypt partially decrypted data fully using their private keys and the key received from cloud.

Amid the record development, every archive is connected with a parallel vector as a sub-record where every bit speaks to whether comparing decisive word is contained in the archive [7]. The inquiry question is likewise depicted as a double vector where every bit implies whether comparing watchword shows up in this hunt demand, so the likeness could be precisely measured by the internal result of the question vector with the data vector. On the other hand, straightforwardly outsourcing the data vector or the question vector will abuse the file protection then again the hunt security. To meet the test of supporting such multi pivotal word semantic without security ruptures, we propose an essential thought for the MRSE utilizing secure inward item reckoning, which is adjusted from a safe k-closest neighbor (kNN) system [10][11.], and after that give two altogether enhanced MRSE schemes in an orderly way to attain to different stringent protection prerequisites.

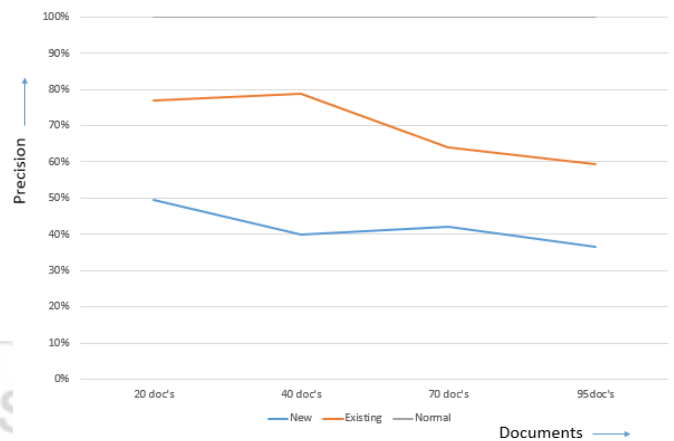
#### 4. Experimental Results

Our test results demonstrate the effectiveness of essential mCL-PKE plan and enhanced methodology for the general population cloud. Figure. 5 demonstrates the time needed to perform the encryption operation in the mCL-PKE plan for distinctive message sizes. Since our plan does not utilize blending operations, it performs encryption productively. As can be seen from the chart, the encryption time increments directly as the message size increments. As the bit length of q builds, the expense increments non-straight subsequent to the encryption calculation performs exponentiation operations. A comparable perception applies to the SEM decryption and client decoding.



**Figure 5:** Comparison of decryption

In this section, we show a careful trial assessment of the proposed strategy on a true information. Figure. 6 demonstrates that the exactness in MRSE plan is apparently influenced by the standard deviation of the arbitrary variable". From the thought of adequacy, standard deviation is relied upon to be littler to get high exactness demonstrating the great purity of retrieved documents.



**Figure 6:** Comparison of Document retrieval

#### 5. Conclusion

In this paper we proposed the first mCL-PKE plan without matching operations and gave its formal security also tackles the key escrow issue and revocation problem. Utilizing the mCL-PKE scheme as a key building square, we proposed an enhanced way to safely impart delicate data public clouds. Our test results demonstrate the proficiency of essential mCL-PKE plan and enhanced methodology for people in public cloud and also provide trust management through SMTP communication. We characterized and explained the issue of multi-keyword ranked search over encrypted cloud data, and created an assortment of protection necessities. For meeting the test of supporting multi-keyword semantic without protection breaks, we proposed a fundamental thought of MRSE utilizing secure internal item calculation. At that point, we gave two moved forward MRSE plans to attain against different stringent security prerequisites in two diverse danger models.

#### References

- [1] Seung-Hyun Seo, Mohamed Nabeel, Xiaoyu Ding and Elisa Bertino "An Efficient Certificateless Encryption for Secure Data Sharing in Public Clouds" IEEE Transactions On Knowledge And Data Engineering, Vol. 26, No. 9, September 2014.
- [2] Ning Cao, Cong Wang, Ming Li, Kui Ren and Wenjing Lou "Privacy-Preserving Multi-Keyword Ranked Search over Encrypted Cloud Data" IEEE Transactions On Parallel And Distributed Systems, Vol. 25, No. 1, January 2014.
- [3] M. Abdalla et al., "Searchable encryption revisited: Consistency properties, relation to anonymousibe, and extensions," J. Cryptol., vol. 21, no. 3, pp. 350–391, Mar. 2008.

- [4] S. Al-Riyami and K. Paterson, "Certificateless public key cryptography," in Proc. ASIACRYPT 2003, C.-S. Lai, Ed. Berlin, Germany: Springer, LNCS 2894, pp. 452–473.
- [5] E. Bertino and E. Ferrari. "Secure and selective dissemination of XML documents," ACM TISSEC, vol. 5, no. 3, pp. 290–331, 2002.
- [6] G. Miklau and D. Suci, "Controlling access to published data using cryptography," in Proc. 29th Int. Conf. VLDB, Berlin, Germany, 2003, pp. 898–909.
- [7] M. Nabeel, N. Shang, and E. Bertino, "Privacy preserving policy based content sharing in public clouds," IEEE Trans. Knowl. Data Eng., vol. 25, no. 11, pp. 2602–2614, Sept. 2012.
- [8] D. Pointcheval and J. Stern, "Security arguments for digital signatures and blind signatures," J. Cryptology, vol. 13, no. 3, pp. 361–396, 2000.
- [9] A. Sahai and B. Waters, "Fuzzy identity-based encryption," LNCS 3494 in Proc. EUROCRYPT, Aarhus, Denmark, 2005, pp. 457–473.
- [10] N. Shang, M. Nabeel, F. Paci, and E. Bertino, "A privacy preserving approach to policy-based content dissemination," in Proc. 2010 IEEE 26th ICDE, Long Beach, CA, USA, pp. 944–955.
- [11] D. Song, D. Wagner, and A. Perrig, "Practical Techniques for Searches on Encrypted Data," Proc. IEEE Symp. Security and Privacy, 2000.
- [12] E.-J. Goh, "Secure Indexes," Cryptology ePrint Archive, <http://eprint.iacr.org/2003/216>. 2003.
- [13] Y.-C. Chang and M. Mitzenmacher, "Privacy Preserving Keyword Searches on Remote Encrypted Data," Proc. Third Int'l Conf. Applied Cryptography and Network Security, 2005.
- [14] R. Curtmola, J.A. Garay, S. Kamara, and R. Ostrovsky, "Searchable Symmetric Encryption: Improved Definitions and Efficient Constructions," Proc. 13th ACM Conf. Computer and Comm. Security (CCS '06), 2006.
- [15] D. Boneh and B. Waters, "Conjunctive, Subset, and Range Queries on Encrypted Data," Proc. Fourth Conf. Theory Cryptography (TCC), pp. 535-554, 2007.
- [16] R. Brinkman, "Searching in Encrypted Data," PhD thesis, Univ. of Twente, 2007.
- [17] Y. Hwang and P. Lee, "Public Key Encryption with Conjunctive Keyword Search and Its Extension to a Multi-User System," Pairing, vol. 4575, pp. 2-22, 2007.
- [18] Public-key cryptography.  
[http://en.wikipedia.org/wiki/Public-key\\_cryptography](http://en.wikipedia.org/wiki/Public-key_cryptography)



**Asha Jose** received the B.Tech Degree in Computer Science & Engineering from Mahatma Gandhi University, Kerala in 2009 and M.E Degree in Computer Science & Engineering from Annamalai University, Chidambaram in 2011. From 2011 to 2015, she worked in various Engineering Colleges as Asst. Professor. Presently she is engaged as a Ph.D Research Scholar with Department of Computer Science & Engineering at Karpagam University, Coimbatore.

## Author Profile



**Shintomon Mathew** received the B.Tech degree in Information Technology from University Of Calicut in 2011 and currently pursuing final year M. Tech degree in Computer Science and Engineering with Specialization in Cyber Security from KMP College of Engineering, Perumbavoor.