

## REFERENCES

- [1] M. Blount, M. Ebling, J. Eklund, A. James, C. McGregor, N. Percival, K. Smith, and D. Sow. Real-time analysis for intensive care: Development and deployment of the artemis analytic system. *Engineering in Medicine and Biology Magazine, IEEE*, 29(2):110–118, March 2010.
- [2] J. Cervino, E. Kalyvianaki, J. Salvachua, and P. Pietzuch. Adaptive provisioning of stream processing systems in the cloud. In *Data Engineering Workshops (ICDEW), 2012 IEEE 28th International Conference on*, pages 295–301, April 2012.
- [3] R. Cocci, T. Tran, Y. Diao, and P. Shenoy. Efficient data interpretation and compression over rfid streams. In *2008 IEEE 24th International Conference on Data Engineering*, pages 1445–1447, April 2008.
- [4] A. Cuzzocrea and S. Chakravarthy. Event-based lossy compression for effective and efficient {OLAP} over data streams. *Data and Knowledge Engineering*, 69(7):678 – 708, 2010. *Advanced Knowledge-based Systems*.
- [5] M. Dayarathna and T. Suzumura. A Mechanism for Stream Program Performance Recovery in Resource Limited Compute Clusters, pages 164–178. Springer Berlin Heidelberg, Berlin, Heidelberg, 2013.
- [6] DERA. Edgar log file data set. URL: <https://www.sec.gov/dera/data/edgar-log-file-data-set.html>, 2017.
- [7] N. Dindar, . Balkesen, K. Kromwijk, and N. Tatbul. Event processing support for cross-reality environments. *IEEE Pervasive Computing*, 8(3):34–41, July 2009.
- [8] C. Gentry. Fully homomorphic encryption using ideal lattices. In *Proceedings of the Forty-first Annual ACM Symposium on Theory of Computing, STOC '09*, pages 169–178, New York, NY, USA, 2009. ACM.
- [9] Google. Cloud dataflow. URL: <https://cloud.google.com/dataflow/>, 2017.
- [10] S. Halevi. An implementation of homomorphic encryption. URL: <https://github.com/shaih/HElib>, 2017.
- [11] S. Halevi and V. Shoup. *Algorithms in HElib*, pages 554–571. Springer Berlin Heidelberg, Berlin, Heidelberg, 2014.
- [12] J. Hazra, K. Das, D. P. Seetharam, and A. Singhee. Stream computing based synchrophasor application for power grids. In *Proceedings of the First International Workshop on High Performance Computing, Networking and Analytics for the Power Grid, HiPCNA-PG '11*, pages 43–50, New York, NY, USA, 2011. ACM.

- [13] W. Hummer, B. Satzger, and S. Dustdar. Elastic stream processing in the cloud. *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*, 3(5):333–345, 2013.
- [14] T. Hunter, T. Das, M. Zaharia, P. Abbeel, and A. Bayen. Large-scale estimation in cyberphysical systems using streaming data: A case study with arterial traffic estimation. *Automation Science and Engineering, IEEE Transactions on*, 10(4):884–898, Oct 2013.
- [15] IBM. Streaming analytics. URL: <https://www.ibm.com/cloud/streaming-analytics>, 2017.
- [16] S. Jayasekara, S. Perera, M. Dayarathna, and S. Suhothayan. Continuous analytics on geospatial data streams with wso2 complex event processor. In *Proceedings of the 9th ACM International Conference on Distributed Event-Based Systems, DEBS '15*, pages 277–284, New York, NY, USA, 2015. ACM.
- [17] S. R. Jeffery, M. J. Franklin, and M. Garofalakis. An adaptive rfid middleware for supporting metaphysical data independence. *The VLDB Journal*, 17(2):265–289, 2008.
- [18] W. Kleiminger, E. Kalyvianaki, and P. Pietzuch. Balancing load in stream processing with the cloud. In *Data Engineering Workshops (ICDEW), 2011 IEEE 27th International Conference on*, pages 16–21, April 2011.
- [19] S. Loesing, M. Hentschel, T. Kraska, and D. Kossmann. Stormy: An elastic and highly available streaming service in the cloud. In *Proceedings of the 2012 Joint EDBT/ICDT Workshops, EDBT-ICDT '12*, pages 55–60, New York, NY, USA, 2012. ACM.
- [20] Y. Nie, R. Cocci, Z. Cao, Y. Diao, and P. Shenoy. Spire: Efficient data inference and compression over rfid streams. *IEEE Transactions on Knowledge and Data Engineering*, 24(1):141–155, Jan 2012.
- [21] A. Page, O. Kocabas, S. Ames, M. Venkitasubramaniam, and T. Soyata. Cloud-based secure health monitoring: Optimizing fully-homomorphic encryption for streaming algorithms. In *2014 IEEE Globecom Workshops (GC Wkshps)*, pages 48–52, Dec 2014.
- [22] Striim. Striim delivers streaming hybrid cloud integration to microsoft azure. URL: <http://www.striim.com/press/hybrid-cloud-integration-to-microsoft-azure>, 2017.
- [23] B. Theeten, I. Bedini, P. Cogan, A. Sala, and T. Cucinotta. Towards the optimization of a parallel streaming engine for telco applications. *Bell Labs Technical Journal*, 18(4):181–197, 2014.

- [24] M. Thompson, D. Farley, M. Barker, P. Gee, and A. Stewart. High performance alternative to bounded queues for exchanging data between concurrent threads. technical paper, LMAX Exchange, 2011.
- [25] M. Togan and C. Plesca. Comparison-based applications for fully homomorphic encrypted data. Proceedings of the Romanian Academy, Series A, Volume 16, Special Issue 2015, pp. 329-338.
- [26] WSO2. Wso2 stream processor. URL: <https://docs.wso2.com/display/SP400/Stream+Processor+Documentation>, 2017.
- [27] Z. Nabi, E. Bouillet, A. Bainbridge, and C. Thomas. Of streams and storms. IBM White Paper, 2014.
- [28] B. Klimt and Y. Yang. Introducing the enron corpus. In CEAS 2004 - First Conference on Email and Anti-Spam, July 30-31, 2004, Mountain View, California, USA, 2004.
- [29] S. Ravindra, , M. Dayarathna, S. Jayasena. Latency Aware Elastic Switching-based Stream Processing Over Compressed Data Streams, ICPE'17, April 22-26, 2017, L'Aquila, Italy.
- [30] Email Processor benchmark data reader. URL: [https://github.com/miyurud/EmailProcessor\\_Siddhi](https://github.com/miyurud/EmailProcessor_Siddhi)
- [31] Event Publisher. URL: <https://github.com/sajithshn/event-publisher>
- [32] Statistics Collector. URL: <https://github.com/sajithshn/statistics-collector>
- [33] Approximate Queries on WSO2 Stream Processor. URL: <https://www.infoq.com/articles/WSO2-algorithms-applied>
- [34] Apache Storm. URL: <http://storm.apache.org/>
- [35] Apache Spark. URL: <https://spark.apache.org/>
- [36] Apache Flink. URL: <https://flink.apache.org/>
- [37] Equifax Data Breach. URL: <https://www.equifaxsecurity2017.com/consumer-notice/#notice>

- [38] Distributed Scaling of WSO2 Complex Event Processor. URL: <https://wso2.com/library/articles/2015/12/article-distributed-scaling-of-wso2-complex-event-processor/>
- [39] Homomorphic encryption. URL: [https://en.wikipedia.org/wiki/Homomorphic\\_encryption](https://en.wikipedia.org/wiki/Homomorphic_encryption)
- [40] Homomorphic encryption implementation - cuHE. URL: <https://github.com/vernamlab/cuHE>
- [41] HE addition support. URL: <https://github.com/shaih/HElib/issues/81>
- [42] Amazon EC2. URL: <https://aws.amazon.com/ec2/>
- [43] iPerf network speed measurement tool. URL: <https://iperf.fr/>
- [44] W. Dai and B. Sunar. cuHE: A Homomorphic Encryption Accelerator Library