

- [7] C. Canali and R. Lancellotti, "Automatic parameter tuning for class-based virtual machine placement in cloud infrastructures," in *Proc. of 23rd International Conference on Software, Telecommunications and Computer Networks*, ser. SoftCOM 2015. IEEE, Sep. 2015.
- [8] M. Rabinovich and O. Spatscheck, *Web caching and replication*. Addison-Wesley Boston, USA, 2002.
- [9] C. Canali and R. Lancellotti, "Improving Scalability of Cloud Monitoring through PCA-Based Clustering of Virtual Machines," *Journal of Computer Science and Technology*, vol. 29, no. 1, pp. 38–52, 2014.
- [10] —, "Automatic virtual machine clustering based on Bhattacharyya distance for multi-cloud systems," in *Proc. of International Workshop on Multi-cloud Applications and Federated Clouds*, Prague, Czech Republic, Apr. 2013, pp. 45–52.
- [11] T. Setzer and M. Bichler, "Using matrix approximation for high-dimensional discrete optimization problems: Server consolidation based on cyclic time-series data," *European Journal of Operational Research*, vol. 227, no. 1, pp. 62–75, 2013.
- [12] W. Fang, X. Liang, S. Li, L. Chiaraviglio, and N. Xiong, "VMPlanner: Optimizing virtual machine placement and traffic flow routing to reduce network power costs in cloud data centers," *Computer Networks*, vol. 57, no. 1, pp. 179 – 196, 2013.
- [13] R. Zhang, R. Routray, D. M. Eyers, D. Chambliss *et al.*, "IO Tetris: Deep storage consolidation for the cloud via fine-grained workload analysis," in *Proc. of IEEE 4th International Conference on Cloud Computing (CLOUD)*, Washington, USA, Jul. 2011.
- [14] B. Addis, D. Ardagna, B. Panicucci, M. S. Squillante, and L. Zhang, "A hierarchical approach for the resource management of very large cloud platforms," *IEEE Transactions on Dependable and Secure Computing*, vol. 10, no. 5, pp. 253–272, 2013.
- [15] D. Breitgand and A. Epstein, "Improving consolidation of virtual machines with risk-aware bandwidth oversubscription in compute clouds," in *Proc. of IEEE INFOCOM*, Orlando, FL, March 2012.
- [16] L. Zhang and D. Ardagna, "SLA Based Profit Optimization in Autonomous Computing Systems," in *Proc. of International Conference on Service Oriented Computing (ICSOC)*, New York, USA, Nov. 2004.
- [17] L. A. Barroso and U. Hözl, "The case for energy-proportional computing," *IEEE computer*, vol. 40, no. 12, pp. 33–37, 2007.
- [18] C. Tang, M. Steinder, M. Spreitzer, and G. Pacifici, "A scalable application placement controller for enterprise data centers," in *Proceedings of the 16th International Conference on World Wide Web*, ser. WWW '07. New York, NY, USA: ACM, 2007, pp. 331–340. [Online]. Available: <http://doi.acm.org/10.1145/1242572.1242618>
- [19] G. Wäscher, H. Haußner, and H. Schumann, "An improved typology of cutting and packing problems," *European Journal of Operational Research*, vol. 183, no. 3, pp. 1109–1130, 2007.
- [20] O. Faroe, D. Pisinger, and M. Zachariasen, "Guided local search for the three-dimensional bin-packing problem," *Informatics journal on computing*, vol. 15, no. 3, pp. 267–283, 2003.
- [21] T. G. Crainic, G. Perboli, and R. Tadei, "Ts 2 pack: A two-level tabu search for the three-dimensional bin packing problem," *European Journal of Operational Research*, vol. 195, no. 3, pp. 744–760, 2009.
- [22] T. Setzer and A. Stage, "Decision support for virtual machine reassignments in enterprise data centers," in *Proc. of Network Operations and Management Symposium*, Osaka, Japan, Apr. 2010.



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