

A Secure Backup System using Multi-Cloud and Fog Computing

Dhanushree A N, Thotli Roopa, Srilekha L. J, Gudipati Bhargavi, Shwetha A

Department of CSE

S J C Institute of Technology, Chickballapur, India

Abstract: *Backing up data is essential for disaster recovery. The infrastructure for cloud-based solutions is already secure. But when all of your data is kept in one cloud, you can't be sure it's private. An additional choice is multi-cloud technology. Data privacy can be increased by using many clouds to store smaller amounts of data, but doing so necessitates that the edge device handles numerous accounts and connections to other clouds. This technology isn't often employed because of these drawbacks. We introduce Drop Store as a simple, extremely safe, and dependable backup system using cutting-edge Multi-Cloud and encryption techniques. To hide any system complexities from the end-user, Drop Store uses a locally hosted device to build an abstraction layer. The user has complete control over "The Droplet." The user won't need to do anything as a result. rely on any unreliable outsiders. This was accomplished via fog computing. DropStore uniqueness comes from the fusion of Multi-Cloud and Fog Computing ideas. The software is available online and is free source. According to performance results, the suggested approach enhances data protection in terms of dependability, security, and privacy preservation while maintaining a clear and simple interface with edge devices.*

Keywords: backing up data, disaster recovery cloud-based solutions, data privacy

REFERENCES

- [1] S. Bell, C. L. Zitnick, K. Bala, and R. Girshick. Insideoutside net: Detecting objects in context with skip pooling and recurrent neural networks. arXiv preprint arXiv:1512.04143, 2015. 6
- [2] J. Deng, W. Dong, R. Socher, L.-J. Li, K. Li, and L. Fei-Fei. Imagenet: A large-scale hierarchical image database. In Computer Vision and Pattern Recognition, 2009. CVPR 2009. IEEE Conference on, pages 248–255. IEEE, 2009. 1
- [3] M. Everingham, L. Van Gool, C. K. Williams, J. Winn, and A. Zisserman. The pascal visual object classes (voc) challenge. International journal of computer vision, 88(2):303–338, 2010. 1
- [4] P. F. Felzenszwalb, R. B. Girshick, and D. McAllester. Discriminatively trained deformable part models, release 4. <http://people.cs.uchicago.edu/pff/latent-release4/>. 8
- [5] R. B. Girshick. Fast R-CNN. CoRR, abs/1504.08083, 2015. 5, 6
- [6] K. He, X. Zhang, S. Ren, and J. Sun. Deep residual learning for image recognition. ArXiv preprint arXiv:1512.03385, 2015. 2, 5, 6
- [7] S. Ioffe and C. Szegedy. Batch normalization: Accelerating deep network training by reducing internal covariate shift. arXiv preprint arXiv:1502.03167, 2015. 2, 5
- [8] A. Krizhevsky, I. Sutskever, and G. E. Hinton. Imagenet classification with deep convolutional neural networks. In Advances in neural information processing systems, pages 1097–1105, 2012. 2
- [9] M. Lin, Q. Chen, and S. Yan. Network in network. arXiv preprint arXiv:1312.4400, 2013. 4
- [10] T.-Y. Lin, M. Maire, S. Belongie, J. Hays, P. Perona, D. Ramanan, P. Dollár, and C. L. Zitnick. Microsoft coco: Common objects in context. In European Conference on Computer Vision, pages 740–755. Springer, 2014. 1, 6
- [11] W. Liu, D. Anguelov, D. Erhan, C. Szegedy, and S. E. Reed. SSD: single shot multibox detector. CoRR, abs/1512.02325, 2015. 5, 6
- [12] G. A. Miller, R. Beckwith, C. Fellbaum, D. Gross, and K. J. Miller. Introduction to wordnet: An online lexical database. International journal of lexicography, 3(4):235–244, 1990. 6
- [13] J. Redmon. Darknet: Open source neural networks in c. <http://pjreddie.com/darknet/>, 2013–2016. 5

- [14] J. Redmon, S. Divvala, R. Girshick, and A. Farhadi. You only look once: Unified, real-time object detection. arXiv preprint arXiv:1506.02640, 2015. 5, 6
- [15] S. Ren, K. He, R. Girshick, and J. Sun. Faster r-cnn: Towards real-time object detection with region proposal networks. arXiv preprint arXiv:1506.01497, 2015. 2, 3, 5, 6