**REFERENCES**

[1] “Vulnearability and threat in 2018,” Skybox Security, Tech.

Rep., 2018. [Online]. Available: https://lp.skyboxsecurity.com/

WICD-2018-02-Report-Vulnerability-Threat-18 Asset.html

[2] D. Lewis, “icloud data breach: Hacking and celebrity

photos,” Duo Security, Tech. Rep., September 2014. [Online].

Available: https://www.forbes.com/sites/davelewis/2014/09/

02/icloud-data-breach-hacking-and-nude-celebrity-photos

[3] T. Hunt, “Hacked dropbox login data of 68 million users is now for

sale on the dark web,” Tech. Rep., September 2016. [Online]. Available:

https://www.troyhunt.com/the-dropbox-hack-is-real/

[4] “Amazon data leak,” ElevenPaths, Tech. Rep., November

2018. [Online]. Available: https://www.elevenpaths.com/

amazon-data-leak/index.html

[5] K. Korosec, “Data breach exposes trade secrets of carmakers

gm, ford, tesla, toyota,” TechCrunch, Tech. Rep., July

2018. [Online]. Available: https://techcrunch.com/2018/07/20/

data-breach-level-one-automakers/

[6] M. Grant, “$93m class-action lawsuit filed against city

of calgary for privacy breach,” Tech. Rep., October 2017.

[Online]. Available: http://www.cbc.ca/news/canada/calgary/

city-calgary-class-action-93-million-privacy-breach-1.4321257

[7] (2020, April) Secure file transfer — whisply. [Online]. Available:

https://whisp.ly/en

[8] (2020, April) Cryptomator: Free cloud encryption for dropbox

and others. [Online]. Available: https://cryptomator.org/

[9] (2020, April) Whitepapers from spideroak. [Online]. Available:

https://spideroak.com/whitepapers/

[10] W. Ma, J. Campbell, D. Tran, and D. Kleeman, “Password entropy

and password quality,” in Fourth International Conference on

Network and System Security, NSS 2010, Melbourne, Victoria,

Australia, September 1-3, 2010, Y. Xiang, P. Samarati, J. Hu,

W. Zhou, and A. Sadeghi, Eds. IEEE Computer Society, 2010, pp.

583–587. [Online]. Available: https://doi.org/10.1109/NSS.2010.

18

[11] (2020, April) Aws sdk support for amazon s3 client-side

encryption. [Online]. Available: https://docs.aws.amazon.com/

general/latest/gr/aws sdk cryptography.html

[12] (2020, April) Cloud storage security - secure cloud storage from

tresorit. [Online]. Available: https://tresorit.com/security

[13] (2020, April) Mega - secure cloud storage and communication.

[Online]. Available: https://mega.nz/

[14] E. Bocchi, I. Drago, and M. Mellia, “Personal cloud storage: Usage,

performance and impact of terminals,” in 4th IEEE International

Conference on Cloud Networking, CloudNet 2015, Niagara Falls,

ON, Canada, October 5-7, 2015. IEEE, 2015, pp. 106–111. [Online].

Available: https://doi.org/10.1109/CloudNet.2015.7335291

[15] “Web cryptography api,” the Web Cryptography WG of

the W3C, Tech. Rep., January 2017. [Online]. Available:

https://www.w3.org/TR/WebCryptoAPI/

[16] A. Haas, A. Rossberg, D. L. Schuff, B. L. Titzer, M. Holman,

D. Gohman, L. Wagner, A. Zakai, and J. Bastien, “Bringing the

web up to speed with webassembly,” in ACM SIGPLAN Notices,

vol. 52, no. 6. ACM, 2017, pp. 185–200.

[17] B. Waters, “Ciphertext-policy attribute-based encryption: An

expressive, efficient, and provably secure realization,” in

International Workshop on Public Key Cryptography. Springer,

2011, pp. 53–70.

[18] W. Zhu, J. Yu, T. Wang, P. Zhang, and W. Xie, “Efficient attributebased

encryption from r-lwe,” Chin. J. Electron, vol. 23, no. 4, pp.

778–782, 2014.

[19] M. Green, S. Hohenberger, B. Waters et al., “Outsourcing the

decryption of abe ciphertexts.” in USENIX Security Symposium,

vol. 2011, no. 3, 2011.

[20] S. Hohenberger and B. Waters, “Online/offline attributebased

encryption,” in International Workshop on Public Key

Cryptography. Springer, 2014, pp. 293–310.

[21] R. Zhang, H. Ma, and Y. Lu, “Fine-grained access control system

based on fully outsourced attribute-based encryption,” Journal of

Systems and Software, vol. 125, pp. 344–353, 2017.

[22] S. Yu, C. Wang, K. Ren, and W. Lou, “Attribute based data

sharing with attribute revocation,” in Proceedings of the 5th

ACM symposium on information, computer and communications

security, 2010, pp. 261–270.

[23] (2020, April) owncloud - the leading opensource cloud

collaboration platform. [Online]. Available: https://owncloud.

org/

[24] (2020, April) Openpgp implementation for javascript. [Online].

Available: https://github.com/openpgpjs/openpgpjs

[25] E. Stark, M. Hamburg, and D. Boneh, “Symmetric cryptography in

javascript,” in Computer Security Applications Conference, 2009.

ACSAC’09. Annual. IEEE, 2009, pp. 373–381.