

Advanced Encryption Password Manager

Our password manager works by applying multiple levels of security and redundancy to safely store your passwords.

Method: We used a combination of AES encryption and Erasure Code along with remote storage on virtual machines to store fragments of data. First the password file would be encrypted using AES encryption method, then that encrypted file would be passed into the erasure code algorithm that would create fragments with parity blocks for redundancy sake. These fragments would be transferred using SSH and python library functions. Then to retrieve the files the reverse operation would occur.

Novelty: The combination of these different methods has not been done before and the implementation of these algorithms was not trivial and provided much difficulty.

