US 20230231850A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2023/0231850 A1**
Lee et al. (43) **Pub. Date:** **Jul. 20, 2023**

(57) **ABSTRACT**

A method for integrating third-party encryption managers with cloud services includes receiving, at data processing hardware, an operation request requesting a cryptographic operation on data comprising an encryption operation or a decryption operation. When the operation is an encryption operation, the method includes transmitting a data encryption key associated with the data to a remote entity. The remote entity encrypts the data encryption key with a key encryption key and transmits the encrypted data encryption key to the data processing hardware. When the operation is a decryption operation, the method includes transmitting the encrypted data encryption key to the remote entity which causes the remote entity to decrypt the encrypted data encryption key with the key encryption key and transmit the decrypted data encryption key and transmit to the data processing hardware.