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(54) Title: PROTECTING COMMERCIAL OFF-THE-SHELF PROGRAM BINARIES FROM PIRACY USING HARDWARE ENCLAVES

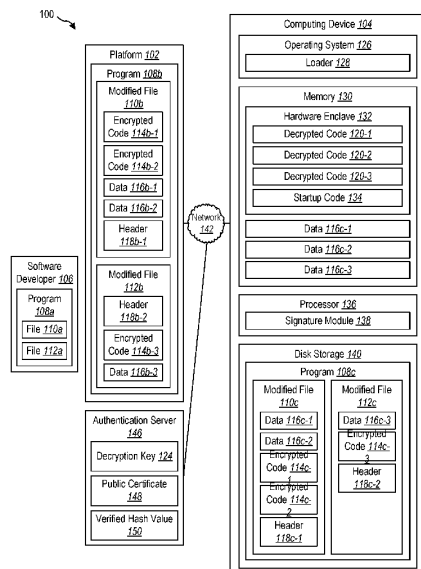


FIG. 1

(57) Abstract: This disclosure describes systems and methods for protecting commercial off-the-shelf software program code from piracy. A software program may include multiple image files having code and data. A platform may modify the executable file such that the data may be placed at a location in memory that is an arbitrary distance from the code. The platform may encrypt the code and provide it to a computing device comprising a hardware enclave. The computing device may load the encrypted code into the hardware enclave but load the data into memory outside the hardware enclave. The computing device may request a decryption key from an authentication server using a hash of the hardware enclave signed by a processor. The authentication server may provide the decryption key if it verifies the signature and the hash. The computing device may decrypt the code and mark the hardware enclave as non-readable.

[Continued on next page]

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