

Chosen Ciphertext Attack (CCA)

In a chosen ciphertext attack, an adversary chooses a number of ciphertexts and is then given the corresponding plaintexts, decrypted with the target's private key.

Thus the adversary could select a plaintext, encrypt it with the target's public key, and then be able to get the plaintext back by having it decrypted with the private key.

The adversary exploits properties of RSA and selects blocks of data that, when processed using the target's private key, yield information needed for cryptanalysis.

To counter such attacks, RSA Security Inc. recommends modifying the plaintext using a procedure known as optimal asymmetric encryption padding (OAEP).