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- (54) **Title:** TECHNIQUES FOR MITIGATING NIC KTLS DENIAL-OF-SERVICE ATTACKS

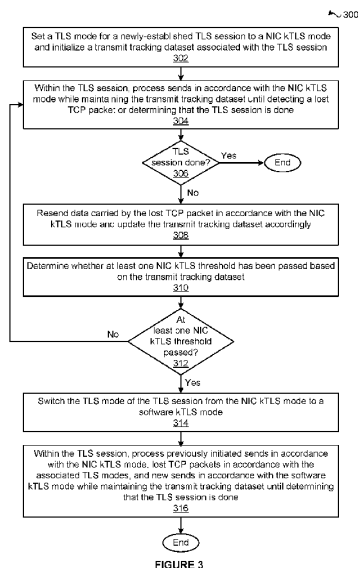


FIGURE 3

(57) **Abstract:** In various embodiments, a kernel uses a NIC to transmit encrypted data over TCP connections. The kernel causes the NIC to encrypt first data to generate a first transmission control protocol (TCP) packet in accordance with a hardware-based transport layer security (TLS) offload mode. The kernel computes a first re-transmission statistic in response to the first TCP packet failing to reach a first device over a first TCP connection; the kernel assigns the first TCP connection to a software-based TLS offload mode instead of the hardware-based TLS offload mode based on the first re-transmission statistic. Subsequently, the kernel encrypts second data to generate a second TCP packet in accordance with the software-based TLS offload mode, the kernel then causes the NIC to transmit the second TCP packet to the first device over the first TCP connection.

WO 2024/030760 A1