



US 20230231826A1

(19) **United States**

(12) **Patent Application Publication**
Pawar

(10) **Pub. No.: US 2023/0231826 A1**

(43) **Pub. Date: Jul. 20, 2023**

(54) **PERFORMANCE IMPROVEMENT OF IPSEC
TRAFFIC USING SA-GROUPS AND
MIXED-MODE SAS**

(52) **U.S. Cl.**
CPC *H04L 61/251* (2013.01); *H04L 61/2571*
(2013.01); *H04L 12/4633* (2013.01)

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(57) **ABSTRACT**

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(21) Appl. No.: **17/715,510**

(22) Filed: **Apr. 7, 2022**

(30) **Foreign Application Priority Data**

Jan. 14, 2022 (IN) 202241002279

Publication Classification

(51) **Int. Cl.**
H04L 61/251 (2006.01)
H04L 61/256 (2006.01)
H04L 12/46 (2006.01)

Some embodiments provide a method of load balancing data message flows across multiple secure connections. The method receives a data message having source and destination addresses formatted according to a first protocol. Based on the source and destination addresses, the method selects one of the multiple secure connections for the data message. Each of the secure connections handles a first set of connections formatted according to the first protocol and a second set of connections formatted according to a second protocol that is an alternative to the first protocol. The method securely encapsulates the data message and forwards the encapsulated data message onto a network. The encapsulation includes an identifier for the selected secure connection.

