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(71) Applicant (for all designated States except US): CISCO TECHNOLOGY, INC. [US/US]; 170 W. Tasman Drive, San Jose, California 95134-1706 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): CAM-WINGER, Nancy [US/US]; 325 Martens Ave., Mountain View, California 94040 (US). ZHOU, Hao [CN/US]; 7381 Cheshire Place, Solon, Ohio 44139 (US). JAKKAHALLI, Padmanabha C. [IN/US]; 173 Debussy Terrace, Sunnyvale,

California 94087 (US). SALOWEY, Joseph [US/US]; 106 N 77th Street, Seattle, Washington 98013 (US). MC-GREW, David A. [US/US]; 14 Hackett Court, Poolesville, Maryland 20837 (US).

(74) Agents: NICHOLES, Christian, A. et al.; HICKMAN PALERMO TRUONG & BECKER LLP, 2055 Gateway Place, Suite 550, San Jose, California 95110-1089 (US).

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(54) Title: ENABLING STATELESS SERVER-BASED PRE-SHARED SECRETS

-300 302 A SERVER SELECTS A PARTICULAR LOCAL KEY FROM AMONG THE SERVER'S SET OF LOCAL KEYS

<u>304</u>

THE SERVER CALCULATES AN AUTHENTICATION CODE BASED ON BOTH A CLIENT'S STATE INFORMATION AND THE PARTICULAR LOCAL KEY

306

USING THE PARTICULAR LOCAL KEY, THE SERVER ENCRYPTS A COMBINATION OF THE AUTHENTICATION CODE, THE CLIENT'S STATE INFORMATION, AND THE CLIENT'S STATE LIFETIME VALUE

308

THE SERVER SENDS, TO THE CLIENT, BOTH THE ENCRYPTED INFORMATION AND AN SPI THAT IS ASSOCIATED WITH THE PARTICULAR LOCAL KEY

310

THE SERVER RECEIVES, FROM THE CLIENT, THE ENCRYPTED INFORMATION, THE SPI AND A REQUEST

312

USING THE LOCAL KEY THAT IS ASSOCIATED WITH THE SP!, THE SERVER DECRYPTS THE ENCRYPTED INFORMATION THAT WAS RECEIVED FROM THE CLIENT

314

THE SERVER CALCULATES A NEW AUTHENTICATION CODE BASED ON THE PARTICULAR LOCAL KEY AND THE CLIENT STATE INFORMATION CONTAINED IN THE DECRYPTED INFORMATION

(57) Abstract: A method is disclosed for enabling stateless server-based pre-shared Based on a local key that is not secrets. known to a client, a server encrypts the client's state information. The client's state information may include, for example, the client's authentication credentials, the client's authorization characteristics, and a shared secret key that the client uses to derive session keys. By any of a variety of mechanisms, the encrypted client state information is provided to the client. The server may free memory that stored the client's state information. When the server needs the client's state information, the client sends, to the server, the encrypted state information that the client stored. The server decrypts the client state information using the local key. Because each client stores that client's own state information in encrypted form, the server does not need to store any client's state information permanently.

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USPC: 709/203,226,227,229;713/150,155,168;726/5,10,12,13 According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
Minimum documentation searched (classification system followed by classification symbols) U.S.: 709/203,226,227,229; 713/150,155,168; 726/5, 10, 12, 13			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where a		Relevant to claim No.
Α	US 6134592 A (MONTULLI) 17 October 2000 (17. 4.	10,2000), Abstract; column 2 - column	1-29
A	US 5,961,601 A (IYENGAR) 05 October 1999 (05.10.1999), Abstract; column 9 - column 10, line 32.		1-29
A	US 6,496,932 B1 (TRIEGER) 17 December 2002 (17.12,2002), Abstract; column 3 - column 5, line 15.		
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Further	documents are listed in the continuation of Box C.	See patent family annex.	
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P.O. Box 1450 Alexandria, Virginia 22313-1450		Telephone No. 571-272-3799	
Facsimile No. (571) 273-3201			