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(54) Title: SECURE AND EFFICIENT ONE-TIME PASSWORD SYSTEM AND METHOD

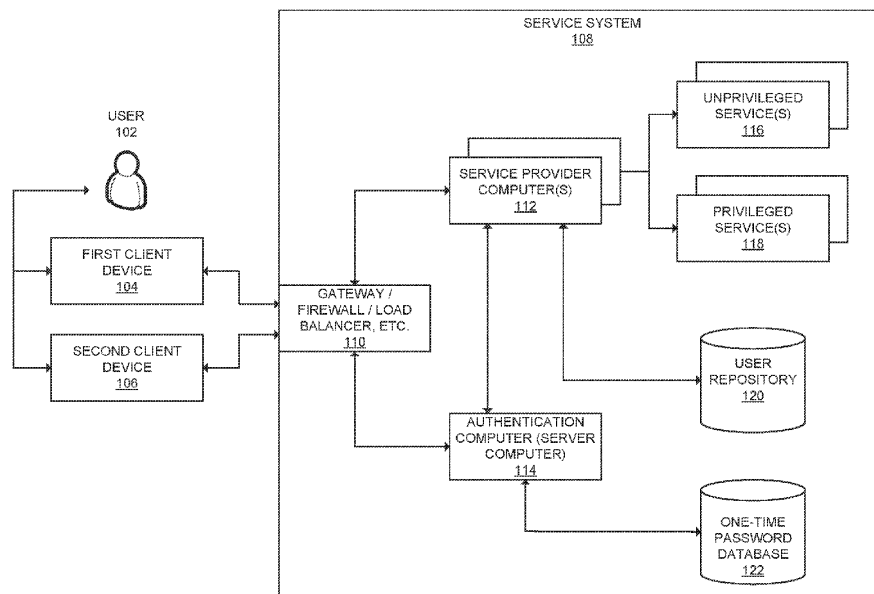


FIG. 1

(57) Abstract: Systems and methods for generating and storing one-time passwords, as well as systems and methods for authenticating users using such one-time passwords are disclosed. A user, operating a client device can request a one-time password from the a server computer. In such a request, the user device can transmit multiple elements of data to the server computer. These elements of data can include a user identifier. The server computer can combine the received data to produce a combination. The server computer can generate a one-time password and a hash of the combination, and store the one-time password in association with the hash. Later, during authentication, the server computer can regenerate the hash and use it to look up the stored one-time password, then compare the stored one-time password to a received one-time password, in order to authenticate the user.

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