FLAT DATA ROUTING CHAIN

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of priority from U.S. Provisional Patent Application No. 62/410,918, entitled "VIRTUAL DATA COMMUNICATION ROUTING," filed October 21, 2016, the entirety of which is incorporated by reference herein.

SUMMARY

According to a first aspect of the present disclosure, there is provided a routing method including: receiving, at a routing server, a request to establish a connection from an originating node to at least one terminating node; determining, with the routing server, a route for the connection based on data in the request, the determining comprising selecting at least two of the following nodes to form the route: the originating node, the originating node establishing at least one first rule for routing data through the at least one originating node, at least one virtual node, the at least one virtual node establishing at least one second rule for routing data through the at least one virtual node, and the at least one terminating node; establishing, with the routing server, the connection between the originating node and the at least one terminating node along the route; and routing, with the routing server, the data between the originating node and the at least one terminating node according to the at least one first rule and/or the at least one second rule.

According to a second aspect of the present disclosure, there is provided a routing system including: a processor coupled to an originating node and at least one terminating node, the processor configured to: receive a request to establish a connection from an originating node to at least one terminating node; determine a route for the connection based on data in the request, the determining comprising selecting at least two of the following nodes to form the route: the originating node, the originating node establishing at least one first rule for routing data through the at least one originating node, at least one virtual node, the at least one virtual node establishing at least one second rule for routing data through the at least one virtual node, and the at least one terminating node; establish the connection between the originating node and the at least one terminating node along the route; and route the data between the originating node and the at least

one terminating node according to the at least one first rule and/or the at least one second rule.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGS. 1A-1B show a data routing chain platform 100 according to embodiments of the invention.

FIG. 2 shows example data routing chain scenarios according to an embodiment of the invention.

FIG. 3 is a server architecture according to an embodiment of the invention.

FIG. 4 is a platform system architecture according to an embodiment of the invention.

FIG. 5 is an example of a LinkID construction according to embodiment of the invention.

FIG. 6 is an example of ChainID construction according to embodiment of the invention.

FIG. 7 is a routing network graph according to an embodiment of the invention.

FIG. 8 is a routing process according to an embodiment of the invention.

FIG. 9 is a post data-routing handling process according to embodiment of the invention.

FIG. 10 is a data route structure description according to an embodiment of the invention.

FIG. 11 is a route decision process according to an embodiment of the invention.

FIG. 12 is a physical routing process according to an embodiment of the invention.

DETAILED DESCRIPTION OF SEVERAL EMBODIMENTS

Systems and methods described herein may facilitate unlimited, multi-party data routing chains within a network environment in real time. Systems and methods described herein may enable the consolidation of independent regional and global data routing networks into a singular environment, thus reducing data transfer latency, minimizing data quality deterioration, and streamlining data routing processes and commercial engagement in a secured environment while maintaining independent abilities for each entity to dictate and