WHAT IS CLAIMED IS:

1. A computer-implemented method for blockchain-based routing managing a routing table utilizing a secure blockchain routing protocol performed by a blockchain routing node of an overlay network, comprising:

transmitting forwarding table request messages to a plurality of blockchain routing nodes;

receiving a plurality of single-node forwarding tables from the plurality of blockchain routing nodes in accordance with an extended blockchain protocol, each of the node forwarding tables corresponding to a respective one of the plurality of blockchain routing nodes, the blockchain routing node participating with the plurality of blockchain routing nodes in an overlay network;

determining the routing table for the overlay network utilizing forwarding information received with the forwarding tables;

determining corresponding forwarding tables for any suitable combination of the blockchain routing node and the plurality of blockchain routing nodes by calculating a total cost associated with each available route associated with the received forwarding information to determine at least one optimal route between each of the blockchain routing nodes in the network utilizing the calculated costs;

distributing the determined forwarding tables to the plurality of blockchain routing nodes; and

maintaining the determined routing table and the determined forwarding tables in one or more blockchain ledgers by transmitting and/or receiving information to and/or from the blockchain routing node and plurality of blockchain routing nodes to collectively maintain the one or more blockchain ledgers.

2. The computer-implemented method of claim 1, further comprising:

executing, by the blockchain routing node, instructions to join the overlay network;

identifying, by the blockchain routing node, the plurality of blockchain routing nodes from a stored data record.

3. The method of claim 2, wherein the data record is stored in local memory of the blockchain routing node.

4. The computer-implemented method of claim 1, further comprising consulting a locally stored forwarding table of the determined forwarding tables to determine a next hop address for a data message to be transmitted through the overlay network.

5. The computer-implemented method of claim 1, further comprising transmitting a distribution message to the plurality of blockchain routing nodes, the distribution message comprising the blockchain ledger, the distribution message being formatted according to the extended blockchain protocol.

6. The computer-implemented method of claim 1, wherein calculating, by the blockchain routing node, the total cost associated with each available route associated with the received forwarding information to determine at least one optimal route comprises calculating the total cost based on performance data associated with respective blockchain routing nodes of the plurality of blockchain routing nodes.

7. The computer-implemented method of claim 6, wherein the performance data comprises at least a first attribute associated with a latency value and a second attribute corresponding to a cost value.

8. The computer-implemented method of claim 7, wherein the total cost associated with each available route is calculated based at least in part by multiplying the latency value by the cost value.

9. The computer-implemented method of claim 1, wherein the extended blockchain protocol defines at least one routing procedure that is undefined in a blockchain protocol from which the extended blockchain protocol extends.

10. A blockchain routing node configured to manage a routing table by utilizing a secure blockchain routing protocol comprising,

a processor, and

a computer readable medium coupled to the processor, the computer readable medium comprising code for causing the processor to perform a method according to any of the preceding claims.

11. A system, comprising:

an overlay network comprising a plurality of blockchain routing nodes, the plurality of blockchain routing nodes individually comprising:

a processor; and

a computer readable medium coupled to the processor, the computer readable medium comprising instructions that, when executed, cause the processor to: perform the method according to any of claims 1-9.