Claims

WHAT IS CLAIMED IS:

1. A method to maintain a blockchain, comprising:

by a device, based at least in part on a determination of an amount of remaining storage available in the device relative to a particular level, trimming at least a portion of a first copy of the blockchain at the device by making storage allocated to the portion of the first copy of the blockchain available, wherein:

the trimming is performed according to instructions preconfigured within the device;

the instructions preconfigured within the device comprise an indication of an amount to be trimmed; and

trimming an amount different than the amount to be trimmed is used to identify a compromised device;

by the device, recalculating the first copy of the blockchain without the portion of the blockchain that has been trimmed from the device; and

by the device, receiving a message from a second device participating in the blockchain, the message including at least a hash of a recalculation of a second copy of the blockchain at the second device, wherein:

the instructions are preconfigured within the second device; and

the second copy of the blockchain is trimmed by the amount to be trimmed.

2. The method of claim 1, further comprising:

by the device, generating an additional block for the blockchain,

wherein the amount of remaining storage available in the device does not include storage for the additional block.

3. The method of claim 2, wherein:

recalculating the first copy of the blockchain includes recalculating the first copy of the blockchain with the additional block.

4. The method of claim 2, further comprising:

sending data of the additional block to the second device participating in the blockchain; and

communicating, in conjunction with the sending the data of the additional block, the hash for the recalculated first copy of the blockchain.

5. The method of claim 1, further comprising:

by the device, receiving from a device at a central location an indication of the second device participating in the blockchain.

6. The method of claim 1, further comprising:

by the device, determining the amount of remaining storage available in the device relative to the particular level,

wherein the determining is performed based at least in part on an amount of time elapsed since a previous determining.

7. The method of claim 6, further comprising:

determining the portion of the first copy of the blockchain to trim from the device based at least in part on the amount of remaining storage available in the device relative to the particular level, wherein the portion of the first copy of the blockchain that is trimmed comprises an oldest block of the first copy of the blockchain.

8. A network communication device, comprising:

a radio configured to communicate with a plurality of other network communication devices;

one or more processors communicatively coupled to the radio; and

memory communicatively coupled to the one or more processors, the memory storing one or more instructions that, when executed by the one or more processors, cause the one or more processors to perform operations comprising:

based at least in part on a determination of an amount of remaining storage available in the network communication device relative to a particular level, trimming at least a

portion of a first copy of a blockchain at the network communication device by making storage allocated to the portion of the blockchain available, wherein:

the trimming is performed according to instructions preconfigured within the network communication device;

the instructions preconfigured within the network communication device comprise an indication of an amount to be trimmed; and

trimming by an amount different than the amount to be trimmed is used to identify a compromised device;

recalculating the first copy of the blockchain without the portion of the first copy of the blockchain that has been trimmed from the network communication device; and

receiving a message from a second network communication device participating in the blockchain, the message including at least a hash of a recalculation of a second copy of the blockchain at the network communication device, wherein:

the instructions are preconfigured within the second network communication device; and

the second copy of the blockchain is trimmed by the amount to be trimmed.

9. The network communication device of claim 8, the operations further comprising:

generating an additional block for the first copy of the blockchain,

wherein the amount of remaining storage available in the network communication device does not include storage for the additional block.

10. The network communication device of claim 9, wherein:

recalculating the first copy of blockchain includes recalculating the first copy of the blockchain with the additional block.

11. The network communication device of claim 10, the operations further comprising:

sending data of the additional block to the second network communication device participating in the blockchain; and

communicating, in conjunction with the sending the data of the additional block, the hash for the recalculated first copy of the blockchain.

12. The network communication device of claim 8, the operations further comprising:

receiving from a device at a central location an indication of the second network communication device participating in the blockchain.

13. The network communication device of claim 8, the operations further comprising:

determining the amount of remaining storage available in the network communication device being relative to the particular level,

wherein the determining is performed based at least in part on an amount of time elapsed since a previous determining.

14. The network communication device of claim 13, the operations further comprising:

determining the portion of the blockchain to trim from the network communication device based at least in part on the amount of remaining storage available in the network communication device relative to the particular level.

15. One or more computer-readable media storing computer-executable instructions that, when executed, cause one or more processors of a device to perform operations comprising:

based at least in part on a determination of an amount of remaining storage available in the device relative to a particular level, trimming at least a portion of a first copy of a blockchain at the device by making storage allocated to the portion of the blockchain available, wherein:

the trimming is performed according to instructions preconfigured within the device;

the instructions preconfigured within the device comprise an indication of an amount to be trimmed; and

trimming by an amount different than the amount to be trimmed is used to identify a compromised device;

recalculating the first copy of the blockchain without the portion of the first copy of the blockchain that has been trimmed from the device; and

receiving a message from a second device participating in the blockchain, the message including at least a hash for a recalculated second copy of the blockchain at the second device, wherein:

the instructions are preconfigured within the second device; and

the recalculated second copy of the blockchain is trimmed by the amount to be trimmed.

16. The one or more computer-readable media of claim 15, the operations further comprising:

generating an additional block for the first copy of the blockchain,

wherein the amount of remaining storage available in the device does not include storage for the additional block.

17. The one or more computer-readable media of claim 16, wherein:

recalculating the first copy of the blockchain includes recalculating the first copy of the blockchain with the additional block.

18. The one or more computer-readable media of claim 16, the operations further comprising:

sending data of the additional block to the second device participating in the blockchain; and

communicating, in conjunction with sending data of the additional block, the hash for the recalculated first copy of the blockchain.

19. The one or more computer-readable media of claim 15, the operations further comprising:

receiving from a device at a central location an indication of the second device participating in the blockchain.

20. The one or more computer-readable media of claim 15, the operations further comprising:

determining the amount of remaining storage available in the device being relative to the particular level,

wherein the determining is performed based at least in part on an amount of time elapsed since a previous determining.