CLAIMS

1. A method of configuring a network to handle multicast messages, the method comprising:

for a first routing node of a plurality of routing nodes of the network, based at least in part on analyzing an indication of multicast group membership and an indication of topology of the network, determining if the first routing node is an ancestor node to a node that is a member of a particular multicast group;

based at least in part on a result of the determining,

creating a multicast forwarding configuration for the first routing node, the multicast forwarding configuration for the first routing node including:

an indication of the particular multicast group; and

an indication of a forwarding operation for the first routing node to carry out on multicast messages associated with the particular multicast group, received by the first routing node, wherein the forwarding operation includes at least a drop operation; and

causing a representation of the created multicast forwarding configuration for the first routing node to be provided to the first routing node.

2. The method of claim 1, further comprising:

for a second routing node of the plurality of routing nodes of the network, based at least in part on analyzing the indication of multicast group membership and the indication of topology of the network, determining if the second routing node is an ancestor node to a node that is a member of the particular multicast group;

based at least in part on a result of the determining for the second routing node;

creating a multicast forwarding configuration for the second routing node, the multicast forwarding configuration for the second routing node including:

an indication of the particular multicast group; and

an indication of a forwarding operation for the second routing node to carry out on multicast messages associated with the particular multicast group, received by the second routing node; and

causing a representation of the created multicast forwarding configuration for the second routing node to be provided to the second routing node.

3. The method of claim 2, wherein:

the indication of the forwarding operation for the second routing node is at least one of a group of unicast transmission, one hop multicast transmission, and no forwarding.

4. The method of claim 1, wherein

the particular multicast group is a first particular multicast group, and

the method further comprising creating the multicast forwarding configuration and providing the representation of the multicast forwarding configuration for a second particular multicast group.

5. The method of claim 1, further comprising:

determining a quantity of nodes in the network that are a member of the particular multicast group.

6. The method of claim 5, further comprising:

based on the determined quantity, determining whether to perform the operations of determining whether the first routing node is an ancestor node and creating a multicast forwarding configuration for the first routing node.

7. A computing device programmed to execute operations to configure a network to handle multicast messages, the operations comprising:

for a first routing node of a plurality of routing nodes of the network, based at least in part on analyzing an indication of multicast group membership and an indication of topology of the network, determining if the first routing node is an ancestor node to a node that is a member of a particular multicast group;

based at least in part on a result of the determining,

creating a multicast forwarding configuration for the first routing node, the multicast forwarding configuration for the first routing node including:

an indication of the particular multicast group; and

an indication of a forwarding operation for the first routing node to carry out on multicast messages associated with the particular multicast group, received by the first routing node, wherein the forwarding operation includes at least a drop operation; and

causing a representation of the created multicast forwarding configuration for the first routing node to be provided to the first routing node.

8. The computing device of claim 7, the operations further comprising:

for a second routing node of the plurality of routing nodes of the network, based at least in part on analyzing the indication of multicast group membership and the indication of topology of the network, determining if the second routing node is an ancestor node to a node that is a member of the particular multicast group;

based at least in part on a result of the determining for the second routing node,

creating a multicast forwarding configuration for the second routing node, the multicast forwarding configuration for the second routing node including:

an indication of the particular multicast group; and

an indication of a forwarding operation for the second routing node to carry out on multicast messages associated with the particular multicast group, received by the second routing node; and

causing a representation of the created multicast forwarding configuration for the second routing node to be provided to the second routing node.

9. The computing device of claim 8, wherein:

the indication of the forwarding operation for the second routing node is at least one of a group of unicast transmission, one hop multicast transmission, and no forwarding.

10. The computing device of claim 7, wherein:

the particular multicast group is a first particular multicast group, and

the operations further comprising creating the multicast forwarding configuration and providing the representation of the multicast forwarding configuration for a second particular multicast group.

11. The computing device of claim 7, the operations further comprising:

determining a quantity of nodes in the network that are a member of the particular multicast group.

12. The computing device of claim 11, the operations further comprising:

based on the determined quantity, determining whether to perform the operations of determining whether the first routing node is an ancestor node and creating a multicast forwarding configuration.

13. A method of operating a network, comprising:

receiving, via a radio of a routing node, a multicast message addressed to a particular multicast group;

based at least in part on a forwarding configuration stored at the routing node and indicating whether the routing node is an ancestor node to a node that is a member of the particular multicast group, determining whether the routing node is to drop the multicast message; and

based at least in part on the determining, forwarding, via the radio of the routing node, the multicast message in accordance with the forwarding configuration, the forwarding configuration further indicating a forwarding operation, associated with the indication of the particular multicast group, for the routing node to carry out on multicast messages received by the routing node addressed to the particular multicast group,

wherein the forwarding configuration indicating whether the routing node is an ancestor node to a node that is a member of the particular multicast group is created based at least in part on analyzing an indication of multicast group membership and an indication of topology of the network.

14. The method of claim 13, further comprising:

receiving, via the radio of the routing node, the forwarding configuration; and

storing the forwarding configuration in a memory of the routing node.

15. The method of claim 13, wherein the forwarding operation is at least one of a group of unicast transmission and one hop multicast transmission.

16. The method of claim 13, wherein:

the particular multicast group is a first particular multicast group and there is no forwarding configuration stored at the routing node for a second particular multicast group; and

the method further comprises:

receiving, via the radio of the routing node, a multicast message addressed to the second particular multicast group; and

forwarding, via the radio of the routing node, the multicast message addressed to the second particular multicast group according to a default forwarding operation of the routing node.

17. The method of claim 16, wherein the default forwarding operation is forwarding by one hop multicast transmission.

18. The method of claim 13, wherein:

the particular multicast group is a first particular multicast group, and

the method further comprises:

receiving, via the radio of the routing node, a message addressed to a second particular multicast group; and

forwarding, via the radio of the routing node, the multicast message addressed to the second particular multicast group, in accordance with the forwarding configuration stored at the routing node, the forwarding configuration indicating the second particular multicast group and a forwarding operation, associated with the indication of the second particular multicast group, for the routing node to carry out on messages received by the routing node addressed to the second particular multicast group.

19. The method of claim 18, wherein the forwarding operation associated with the indication of the second particular multicast group is the same as the forwarding operation associated with the indication of the first particular multicast group.

20. The method of claim 18, wherein the forwarding operation associated with the indication of the second particular multicast group is different from the forwarding operation associated with the indication of the first particular multicast group.