What is claimed is:

1. A method comprising:

identifying, by a first node device in a mesh network, a plurality of neighbor node devices that have one or more blocks of a dataset;

determining, by the first node device, quality scores for respective node devices of the plurality of neighbor node devices;

selecting, by the first node device based on the quality scores, a second node device from the plurality of neighbor node devices; and

sending, by the first node device to the second node device, a first request to receive at least one block of the one or more blocks.

2. The method of claim 1, wherein selecting the second node device from the plurality of neighbor node devices comprises determining that the second node device has a highest quality score of the quality scores.

3. The method of claim 1, wherein a first quality score of the second node device is based on at least one of:

a type of a link communicatively coupling the first node device to the second node device,

a data rate of the link,

a packet success rate for packets sent using the link, or

an amount of network traffic at the second node device.

4. The method of claim 1, wherein a first quality score for the second node device is based on a weighted combination of a plurality of quality factors associated with the second node device.

5. The method of claim 1, further comprising:

after sending the first request to the second node device, determining, at the first node device, that a quality check criterion has been met; and

in response to the quality check criterion being met, determining, at the first node device, updated quality scores for the respective node devices of the plurality of neighbor node devices.

6. The method of claim 5, further comprising:

selecting, by the first node device based on the updated quality scores, a third node device from the plurality of neighbor node devices; and

sending, by the first node device to the third node device, a second request to receive at least one or more additional blocks of the dataset.

7. The method of claim 5, wherein determining that the quality check criterion has been met comprises at least one of:

determining that the second node device is operating in a long-range physical layer mode,

determining that a first quality score associated with the second node device is below a first threshold value,

determining that a packet success rate associated with receipt of the at least one block by the first node device is below a second threshold value,

determining that a data rate associated with the second node device is below a third threshold value,

determining that a number of blocks of the dataset that have been received from the second node device exceeds a fourth threshold value,

determining that a communication link with the second node device has been lost, or

determining that a quality check period has expired.

8. The method of claim 7, wherein a duration of the quality check period is based on:

a fixed time interval; or

a type of link coupling the first node device to the second node device.

9. The method of claim 1, wherein identifying the plurality of neighbor node devices that have the one or more blocks of the dataset comprises:

sending respective queries to the respective node devices of the plurality of neighbor node devices; and

receiving respective responses to the respective queries from the respective node devices of the plurality of neighbor node devices.

10. One or more non-transitory computer-readable media storing program instructions that, when executed by one or more processors of a first node of a mesh network, cause the one or more processors to perform operations comprising:

identifying a plurality of second nodes of the mesh network that have one or more portions of a dataset and are neighbors to the first node;

determining quality rankings for respective nodes of the plurality of second nodes;

selecting, based on the quality rankings, a third node from the plurality of second nodes; and

transmitting, to the third node, a request to receive the one or more portions of the dataset.

11. The one or more non-transitory computer-readable media of claim 10, wherein selecting the third node from the plurality of second nodes comprises determining that a first quality ranking of the third node is a highest quality ranking of the quality rankings.

12. The one or more non-transitory computer-readable media of claim 10, wherein a first quality ranking of the third node is based on at least one of:

a type of a link coupling the first node to the third node,

a data rate of the link,

a success rate for messages transmitted over the link, or

a network traffic level at the third node.

13. The one or more non-transitory computer-readable media of claim 10, wherein the operations further comprise calculating a weighted sum of a plurality of quality

factors associated with the third node to determine a first quality ranking for the third node.

14. The one or more non-transitory computer-readable media of claim 10, wherein the operations further comprise:

after transmitting the request to the third node, determining that a quality check condition has been met;

in response to the quality check condition being met, determining updated quality rankings for the plurality of second nodes;

selecting, based on the updated quality rankings, a fourth node from the plurality of second nodes; and

transmitting, to the fourth node, a request to receive one or more additional portions of the dataset.

15. The one or more non-transitory computer-readable media of claim 10, wherein the quality rankings are determined based on information that is stored at the first node prior to identifying the plurality of second nodes.

16. The one or more non-transitory computer-readable media of claim 10, wherein the dataset comprises a firmware update for the first node.

17. A network device in a mesh network, the network device comprising:

one or more processors, and

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

determining which of a plurality of neighboring network devices in the mesh network have at least part of a dataset;

determining quality values for respective network devices of the plurality of neighboring network devices that have at least part of the dataset;

selecting, based on the quality values, a second network device from the plurality of neighboring network devices that have at least part of the dataset; and

requesting, from the second network device, at least one block from the dataset.

18. The network device of claim 17, wherein selecting the second network device from the plurality of neighboring network devices that have at least part of the dataset comprises determining that a first quality value of the second network device is a highest quality value of the quality values.

19. The network device of claim 17, wherein the operations further comprise calculating a weighted sum of a plurality of quality factors associated with the second network device to determine a first quality value for the second network device.

20. The network device of claim 17, wherein determining which of the plurality of neighboring network devices that have at least part of the dataset comprises:

transmitting respective queries to network devices that are neighbors to the network device; and

receiving respective responses to the respective queries from the plurality of neighboring network devices that have at least part of the dataset.