WHAT IS CLAIMED IS:

1. A virtual network, comprising:

a virtual entry device;

a virtual exit device to be coupled to a remote router/switch; and

a communication channel coupled to the virtual entry device and the virtual exit device,

the virtual entry device to:

receive an input frame having a header that identifies the remote router/switch, the input frame originating from one of a plurality of sources;

determine the virtual exit device from the identity of the remote router/switch;

encapsulate the input frame to form a first encapsulated frame, the first encapsulated frame having a field that identifies the virtual exit device, and a field that includes the input frame;

determine a next hop for the first encapsulated frame from the identity of the virtual exit device;

encapsulate the first encapsulated frame to form a second encapsulated frame, the second encapsulated frame having a field that identifies a next hop for the second encapsulated frame, and a field that includes the first encapsulated frame;

combine the second encapsulated frame with other second encapsulated frames from the plurality of sources to form a sequence of second encapsulated frames; and

transmit the sequence of second encapsulated frames.

2. The virtual network of claim 1, wherein the virtual exit device to:

receive the sequence of second encapsulated frames; and

separate the second encapsulated frame from the sequence of second encapsulated frames.

3. The virtual network of claim 2, wherein the virtual exit device to further:

unpack the second encapsulated frame to extract the first encapsulated frame;

unpack the first encapsulated frame to extract the input frame; and

transmit the input frame to the remote router/switch.

4. The virtual network of claim 3, wherein:

the virtual entry device generates a test frame that has a header that identifies a virtual exit device under test, and transmits the test frame to the virtual exit device under test; and

the virtual exit device receives the test frame, unpacks the test frame, and determines one or more measures of status from the unpacked test frame.

5. The virtual network of claim 3, wherein the communication channel includes a fiber optic cable that passes the plurality of packed data frames as a single stream of data at a single wavelength.

6. The virtual network of claim 3, wherein the virtual entry device encapsulates the input frame with a protocol from a group of protocols that includes a provider backbone bridge-traffic engineering (PBB-TE) protocol and a transfer multiprotocol listing switch (T-MPLS) protocol.

7. A method of operating a virtual network, comprising:

receiving an input frame having a header that identifies a remote router/switch, the input frame originating from one of a plurality of sources;

determining a virtual exit device from the identity of the remote router/switch;

encapsulating the input frame to form a first encapsulated frame, the first encapsulated frame having a field that identifies the virtual exit device, and a field that includes the input frame;

determining a next hop for the first encapsulated frame from the identity of the virtual exit device;

encapsulating the first encapsulated frame to form a second encapsulated frame, the second encapsulated frame having a field that identifies a next hop for the second encapsulated frame, and a field that includes the first encapsulated frame;

combining the second encapsulated frame with other second encapsulated frames from the plurality of sources to form a sequence of second encapsulated frames; and

transmitting the sequence of second encapsulated frames.

8. The method of claim 7, further comprising:

receiving the sequence of second encapsulated frames; and

separating the second encapsulated frame from the sequence of second encapsulated frames.

9. The method of claim 8, further comprising:

unpacking the second encapsulated frame to extract the first encapsulated frame;

unpacking the first encapsulated frame to extract the input frame; and

transmitting the input frame to the remote router/switch identified in the headers of the input frame.

10. The method of claim 8, further comprising:

generating a test frame that has a header that identifies a virtual exit device under test, and transmitting the test frame to the virtual exit device under test; and

receiving the test frame, unpacking the test frame, and determining one or more measures of status from the unpacked test frame.

11. The method of claim 8, further comprising passing the sequence of second encapsulated frames from the virtual entry device to the virtual exit device, the sequence of second encapsulated frames being passed in a fiber optic cable as a single stream of data at a single wavelength.

12. The method of claim 8, wherein the sequence of second encapsulated frames includes a first frame that includes an input frame that originated from a first source, a second frame that includes an input frame that originated from a second source, and a third frame that includes an input frame that originated from a third source.

13. The method of claim 8, wherein the input frame is encapsulated with a protocol from a group of protocols that include a provider backbone bridge-traffic engineering (PBB-TE) protocol and a transfer multiprotocol listing switch (T-MPLS) protocol.

14. A non-transitory computer-readable storage medium having embedded therein program instructions, which when executed by a processor causes the processor to execute a method of operating a virtual network, the method comprising:

receiving an input frame having a header that identifies a remote router/switch, the input frame originating from one of a plurality of sources;

determining a virtual exit device from the identity of the remote router/switch;

encapsulating the input frame to form a first encapsulated frame, the first encapsulated frame having a field that identifies the virtual exit device, and a field that includes the input frame;

determining a next hop for the first encapsulated frame from the identity of the virtual exit device;

encapsulating the first encapsulated frame to form a second encapsulated frame, the second encapsulated frame having a field that identifies a next hop for the second encapsulated frame, and a field that includes the first encapsulated frame;

combining the second encapsulated frame with other second encapsulated frames from the plurality of sources to form a sequence of second encapsulated frames; and

transmitting the sequence of second encapsulated frames.

15. The medium of claim 14, further comprising:

receiving the sequence of second encapsulated frames; and

separating the second encapsulated frame from the sequence of second encapsulated frames.

16. The medium of claim 15, further comprising:

unpacking the second encapsulated frame to extract the first encapsulated frame;

unpacking the first encapsulated frame to extract the input frame; and

transmitting the input frame to the remote router/switch identified in the headers of the input frame.

17. The medium of claim 16, further comprising

generating a test frame that has a header that identifies a virtual exit device under test, and transmitting the test frame to the virtual exit device under test; and

receiving the test frame, unpacking the test frame, and determining one or more measures of status from the unpacked test frame.

18. The medium of claim 14, wherein the method further comprises passing the sequence of second encapsulated frames from the virtual entry device to the virtual exit device, the sequence of second encapsulated frames being passed in a fiber optic cable as a single stream of data at a single wavelength.

19. The medium of claim 14, wherein the sequence of second encapsulated frames includes a first frame that includes an input frame that originated from a first source, a second frame that includes an input frame that originated from a second source, and a third frame that includes an input frame that originated from a third source.

20. The medium of claim 14, wherein the input frame is encapsulated with a protocol from a group of protocols that include a provider backbone bridge-traffic engineering (PBB-TE) protocol and a transfer multiprotocol listing switch (T-MPLS) protocol.