CLAIMS:

1. A method of managing routes of data traffic within a network, the method comprising performing, by a computer system:

providing a user interface for a user to input an address and a first routing action;

receiving the address and the first routing action via the user interface;

updating a configuration file to specify the first routing action to be performed for the address;

converting the configuration file into router management commands; and

sending the router management commands to a plurality of border routers of the network.

2. The method of claim 1, wherein the address is a source address.

3. The method of claim 1, wherein the address is a destination address.

4. The method of any one of the preceding claims, wherein the plurality of border routers to send the router management commands is determined based on a geographic location of the border routers.

5. The method of any one of the preceding claims, wherein updating the configuration file includes adding the address to the configuration file.

6. The method of any one of the preceding claims, wherein updating the configuration file includes changing a previous routing action for the address to be the first routing action.

7. The method of any one of the preceding claims, wherein the computer system is a server, optionally wherein the router management commands are Border Gateway Protocol (BGP) commands, and wherein the server acts as BGP speaker.

8. The method of any one of the preceding claims, wherein the user interface is provided by the server setting the user interface to a client device.

9. The method of any one of the preceding claims, wherein the computer system includes a server in a transmitting device, wherein the transmitting device converts the configuration file and sends the router management command.

10. The method of any one of the preceding claims, wherein the user interface provides a plurality of routing actions from which to select, optionally wherein the plurality of routing actions includes a null routing action.

11. The method of claim 10, wherein the plurality of routing actions includes a diversion routing action that specifies a computing device within the network that is not a destination address.

12. The method of any one of claims 10 or 11, wherein the plurality of routing actions includes the discard routing action, where the discarding occurs at the plurality of border routers.

13. The method of any one of the preceding claims, wherein a computing device filters network traffic based on rules, optionally wherein the filtering mitigates denial of service attacks on a destination address.

14. The method of any one of the preceding claims, further comprising:

forwarding one or more router management commands from the plurality of border routers to one or more other routers based on the first routing action.

15. The method of any one of the preceding claims, wherein the address specifies a range of addresses.

16. The method of any one of the preceding claims, wherein the user interface displays a list of destination addresses and an associated routing action, optionally wherein the user interface provides selection objects for editing or deleting the destination address of list.

17. The method of any one of the preceding claims, wherein the user interface provides selection object to add a border router to which the router management commands are sent.

18. The method of claim 16, wherein the user interface displays a time associated with each destination address on the list, optionally wherein the time corresponds to how long the associated routing action has been performed for each destination address on the list.

19. The method of any one of the preceding claims, further comprising:

receiving a first source address corresponding to the address, the first source address designated as a good address; and

adding the first was addressed to the configuration file, wherein the router management commands specify that network traffic from the first source address is to be sent to the address for any routing action.

20. The method of any one of the preceding claims, further comprising:

receiving, via the user interface, a future time for which the first routing action is to be used; and

waiting until the future time to update the configuration file.

21. The method of any one of the preceding claims, further comprising:

receiving, via the user interface, a future time for which the first routing action is to end and a previous routing action is to be used;

identifying with future time is reached;

subsequent to the identification, updating the configuration file to specify the previous routing action is performed for the address;

converting the configuration file into new router management commands;

sending the new router management commands.

22. The method of any one of the preceding claims, further comprising:

sending a message to each of the plurality of border routers; and

updating a status on the user interface based on responses from the border routers, optionally further comprising:

sending an alert message to a system operator if no response is received from a border router.

23. The method of any one of the preceding claims, further comprising:

querying a routing log file for routing changes; and

adding any new route changes to a database of routing changes.

24. The method of any one of the preceding claims, wherein the address is a destination address, the method further comprising:

accessing a plurality of routing tables from a plurality of routers of the network to determine possible routes to the address, the plurality of routers including the plurality of border routers; and

displaying information about the possible routes to the address, optionally wherein the information about the possible routes includes where the routes will exit the network.

25. The method of any one of the preceding claims, further comprising:

receiving credentials from the user; and

determining a type of account of the user from a plurality of account types based on the credentials, wherein one account type is a limited account that has allowed routing actions that are a subset of all routing actions allowed,

optionally further comprising:

displaying only allowed routing actions to a particular user that has the limited account.

26. A method of conducting router health checks, the method comprising performing, by a computer system:

receiving an address and a routing action via a user interface;

updating a configuration file to specify the routing action to be performed for the address;

converting the configuration file into router management commands;

sending the router management commands to a plurality of border routers of a network;

sending a message to each of the plurality of border routers;

receiving one or more responses from the plurality of border routers; and

updating a status on the user interface based on responses from the plurality of border routers.

27. A method of configuring routers, the method comprising performing, by a computer system:

providing a user interface for a user to specify a customer network and to input a routing action to route traffic to the customer network via a mitigation network, the customer network including a plurality of customer router addresses;

receiving, via the user interface, the specification of the customer network and the routing action to route traffic to the customer network via a mitigation network;

initiating one or more connections between the mitigation network and the customer network using a plurality of routing variables; and

sending, to a plurality of routing devices, router management commands to route traffic destined for the customer network to the mitigation network, the plurality of routing devices being external to the mitigation network.

28. The method of claim 27, comprising any one or more of:

the customer network is specified as a plurality of network addresses;

or

the routing variables include an Ethernet frame size;

or

the routing variables include a plurality of internal addresses;

or

the routing variables include a plurality of external addresses;

or

the connections are IP tunnels, optionally comprising any one or more of:

the user interface further includes a mechanism for inputting a plurality of routing variables and wherein the routing variables are used to initiate the IP tunnels; or

the user interface further includes a mechanism for inputting the number of IP tunnels to be initiated; or

the IP tunnels are GRE tunnels.

29. The method of any one of claims 1 to 25, wherein the method comprises performing, by a computer system:

updating the configuration file to specify the first routing action to be performed by a border router associated with the address;

converting the configuration file into router management commands to be performed by the border router associated with the address based on the first routing action.

30. The method of claim 26, wherein the method comprises performing, by a computer system:

updating the configuration file to specify the routing action to be performed by a border router associated with the address; and

converting the configuration file into router management commands to be executed by the border router associated with the address to perform the routing action.

31. The method of any one of claims 27 or 28, wherein the method comprises performing, by a computer system:

updating a configuration file to specify the routing action to route the traffic to the customer network via the mitigation network; and

converting the configuration file into router management commands based on the routing action to route the traffic to the customer network via the mitigation network.