CLAIMS

1. A method for providing a scrubbing service from a network, the method comprising:

receiving, in response to a denial of service attack on a device of a telecommunications network, routing information associated with the device and through a first routing protocol announcement session, the routing information comprising an Internet Protocol (IP) address associated with the device;

associating the IP address with a customer profile of a scrubbing environment of the telecommunications network, the scrubbing environment providing traffic scrubbing services to the customer of the telecommunications network; and

transmitting, to a scrubbing device of the scrubbing environment and in response to the received routing information for the device of the telecommunications network, an instruction to add the IP address to a list of scrubbed IP addresses of the scrubbing device through the first routing protocol announcement session.

2. The method of claim 1 further comprising:

modifying the received routing information; and

announcing the modified received routing information to a router of the telecommunications network through a second routing protocol announcement session.

3. The method of claim 2 wherein the first routing protocol announcement session and the second routing protocol announcement session each comprise a Border Gateway Protocol (BGP) announcement session within the telecommunications network.

4. The method of any one of claims 1 to 3, further comprising:

obtaining a customer scrubbing state of the scrubbing environment based at least on the customer profile of the scrubbing environment, the customer scrubbing state comprising an indication of a stored scrubbing state for the IP address associated with the device.

5. The method of claim 4 wherein the customer scrubbing state of the scrubbing environment indicates no existing customer profile stored with the scrubbing environment and the instruction further creates a scrubbing customer profile associated with the IP address of the device in the scrubbing environment.

6. The method of any one of claims 1 to 5, further comprising:

accessing a database of customer information to the telecommunications network, the customer information comprising a plurality of IP addresses associated with each customer to the telecommunications network.

7. The method of any one of claims 1 to 6, wherein the scrubbing environment comprises a scrubbing controller and a plurality of scrubbing servers, the scrubbing controller providing scrubbing instructions to the plurality of scrubbing servers to provide the traffic scrubbing services to the customer of the telecommunications network.

8. The method of claim 7 wherein the instruction further comprises a load balancing instruction to load balance the scrubbing service for the at least one IP address across the plurality of scrubbing servers.

9. The method of claim 7 wherein the instruction causes the scrubbing controller to remove the IP address of the device from the list of scrubbed IP addresses of the scrubbing device of the scrubbing environment when the IP address associated with the device is no longer announced from the device.

10. An orchestrator device of a scrubbing environment of a telecommunications network, the orchestrator comprising:

at least one communication port receiving routing information through a first routing protocol announcement in response to a detected denial of service attack on the device, the routing information comprising at least one Internet Protocol (IP) address associated with a device of the telecommunications network;

a processing device; and

a computer-readable medium connected to the processing device configured to store information and instructions that, when executed by the processing device, performs the operations of:

associating the at least one IP address with a customer profile of the scrubbing environment of the telecommunications network, the scrubbing environment providing traffic scrubbing services to the customer of the telecommunications network;

obtaining a customer scrubbing state of the scrubbing environment based at least on the customer profile of the scrubbing environment, the customer scrubbing state comprising an indication of a stored scrubbing state for the IP address associated with the device; and

transmitting one or more instructions to the scrubbing environment to add the at least one IP address to a list of scrubbed IP addresses of at least one scrubbing device of the scrubbing environment in response to the received routing information for the device of the telecommunications network through the first routing protocol announcement.

11. The orchestrator device of claim 10 wherein the information and instructions, when executed by the processing device, further performs the operations of:

modifying the received routing information; and

announcing the modified received routing information to a router of the telecommunications network through a second routing protocol announcement.

12. The orchestrator of claim 11 wherein the first routing protocol announcement and the second routing protocol announcement each comprise a Border Gateway Protocol (BGP) announcement session within the telecommunications network.

13. The orchestrator of any one of claims 10 to 12, wherein the customer scrubbing state of the scrubbing environment indicates no existing customer profile stored with the scrubbing environment and the one or more instructions further create a scrubbing customer profile associated with the at least one IP address of the device in the scrubbing environment.

14. The orchestrator of any one of claims 10 to 13, wherein the scrubbing environment comprises a scrubbing controller and a plurality of scrubbing servers, the scrubbing controller providing scrubbing instructions to the plurality of scrubbing servers to provide the traffic scrubbing services to the customer of the telecommunications network.

15. The orchestrator of claim 14 wherein the one or more instructions further comprise a load balancing instruction to load balance the scrubbing service for the at least one IP address across the plurality of scrubbing servers.

16. A method for operating a telecommunications network comprising:

receiving a device identifier from a device under a denial of service (DOS) attack, the device identifier received through a first routing protocol announcement session for the device; and

transmitting an instruction to a scrubbing environment to add the device identifier to a list of scrubbed device identifiers of a scrubbing device of the scrubbing environment in response to the received device identifier of the device through the first routing protocol announcement session.

17. The method of claim 16 wherein the device identifier is an Internet Protocol (IP) address.

18. The method of claim 16 or 17, further comprising:

associating the device identifier with a customer profile of a scrubbing environment of the telecommunications network, the scrubbing environment providing traffic scrubbing services to the customer of the telecommunications network.

19. The method of any one of claims 16 to 18, further comprising:

modifying the device identifier; and

announcing the modified device identifier to a router of the telecommunications network through a second routing protocol announcement session.

20. The method of claim 19 wherein the first routing protocol announcement session and the second routing protocol announcement session each comprise a Border Gateway Protocol (BGP) announcement session within the telecommunications network.