Claims:

1. A method for controlling traffic transmission, characterized in that, the method comprises:

conducting, in response to traffic data generated by a target container, transmission layer traffic filtering on the traffic data based on a transmission layer traffic filtering strategy set in the target container, and determining the traffic data that has passed the transmission layer traffic filtering as first data;

forwarding the first data to an application layer detector by a network bridge connected to the target container, conducting application layer traffic filtering on the first data by the application layer detector, and determining the traffic data that has passed the application layer traffic filtering as second data; and

transmitting the second data to a host connected to the network bridge by the network bridge, and transmitting the second data to a destination end corresponding to the second data by the host.

2. The method of claim 1, characterized in that, before conducting transmission layer traffic filtering on the traffic data based on a transmission layer traffic filtering strategy set in the target container, the method further comprises:

obtaining the transmission layer traffic filtering strategy, corresponding to the target container, generated by a network policer, and transmitting the transmission layer traffic filtering strategy to the network bridge, wherein the transmission layer traffic filtering strategy indicates quintuple information that satisfies a transmission requirement and quintuple information that does not satisfy a transmission requirement; and

setting the transmission layer traffic filtering strategy in an independent network namespace of the target container by the network bridge; and

wherein conducting transmission layer traffic filtering on the traffic data based on a transmission layer traffic filtering strategy set in the target container comprises:

reading the transmission layer traffic filtering strategy from the independent network namespace, and conducting transmission layer traffic filtering on the traffic data based on quintuple information carried by the traffic data, and the quintuple information that satisfies the transmission requirement and the quintuple information that does not satisfy the transmission requirement that are indicated by the transmission layer traffic filtering strategy.

3. The method of claim 1, characterized in that, the target container is set with a first network interface, the host is set with a second network interface, and the network bridge is set with a third network interface and a fourth network interface, wherein the first network interface is communicatively connected with the third network interface, and the second network interface is communicatively connected with the fourth network interface;

forwarding the first data to an application layer detector by a network bridge connected to the target container comprises:

receiving the first data transmitted by the first network interface of the target container by the third network interface of the network bridge connected to the target container, and invoking a packet forwarding function of the network bridge so as to forward the first data to the application layer detector; and

transmitting the second data to a host connected to the network bridge by the network bridge comprises:

forwarding the second data to the second network interface of the host connected to the network bridge by the fourth network interface of the network bridge.

4. The method of claim 1, characterized in that, conducting application layer traffic filtering on the first data by the application layer detector comprises:

invoking a traffic filtering model associated with the target container from a pre-trained traffic filtering model set by the application layer detector; and

conducting application layer traffic filtering on the first data based on the invoked traffic filtering model.

5. A method for controlling traffic transmission, characterized in that, the method comprises:

forwarding, in response to traffic data received by a host, the traffic data to an application layer detector by a network bridge connected to the host, conducting application layer traffic filtering on the traffic data by the application layer detector, and determining the traffic data that has passed the application layer traffic filtering as third data;

transmitting the third data to a target container connected to the network bridge by the network bridge, conducting transmission layer traffic filtering on the third data based on a transmission layer traffic filtering strategy set inside the target container, and determining the traffic data that has passed the transmission layer traffic filtering as fourth data; and

processing the fourth data in the target container.

6. The method of claim 5, characterized in that, the target container is set with a first network interface, the host is set with a second network interface, and the network bridge is set with a third network interface and a fourth network interface, wherein the first network interface is communicatively connected with the third network interface, and the second network interface is communicatively connected with the fourth network interface;

forwarding the traffic data to an application layer detector by a network bridge connected to the host comprises:

receiving the traffic data transmitted by the second network interface of the host by the fourth network interface of the network bridge connected to the host, and invoking a packet forwarding function of the network bridge to forward the traffic data to the application layer detector;

transmitting the third data to a target container connected to the network bridge by the network bridge comprises:

forwarding the third data to the first network interface of the target container connected to the network bridge by the third network interface of the network bridge.

7. The method of claim 5, characterized in that, conducting application layer traffic filtering on the traffic data by the application layer detector comprises:

invoking a traffic filtering model associated with the target container from a pre-trained traffic filtering model set by the application layer detector; and

conducting application layer traffic filtering on the traffic data based on the invoked traffic filtering model.

8. The method of claim 5, characterized in that, before conducting transmission layer traffic filtering on the third data based on a transmission layer traffic filtering strategy set in the target container, the method further comprises:

obtaining the transmission layer traffic filtering strategy, corresponding to the target container, generated by a network policer, and transmitting the transmission layer traffic filtering strategy to the network bridge, wherein the transmission layer traffic filtering strategy indicates quintuple information that satisfies a transmission requirement and quintuple information that does not satisfy a transmission requirement; and

setting the transmission layer traffic filtering strategy in an independent network

namespace of the target container by the network bridge;

wherein conducting transmission layer traffic filtering on the third data based on a transmission layer traffic filtering strategy set in the target container comprises:

reading the transmission layer traffic filtering strategy from the independent network namespace, and conducting transmission layer traffic filtering on the third data based on quintuple information carried by the third data, and the quintuple information that satisfies the transmission requirement and the quintuple information that does not satisfy the transmission requirement that are indicated by the transmission layer traffic filtering strategy.

9. An apparatus for controlling traffic transmission, characterized in that, the apparatus comprises:

a first filtering module configured to conduct, in response to traffic data generated by a target container, transmission layer traffic filtering on the traffic data based on a transmission layer traffic filtering strategy set in the target container, and determine the traffic data that has passed the transmission layer traffic filtering as first data;

a second filtering module configured to forward the first data to an application layer detector by a network bridge connected to the target container, conduct application layer traffic filtering on the first data by the application layer detector, and determine the traffic data that has passed the application layer traffic filtering as second data; and

a first processing module configured to transmit the second data to a host connected to the network bridge by the network bridge, and transmit the second data to a destination end corresponding to the second data by the host.

10. An apparatus for controlling traffic transmission, characterized in that, the apparatus comprises:

a third filtering module configured to forward, in response to traffic data received by a host, the traffic data to an application layer detector by a network bridge connected to the host, conduct application layer traffic filtering on the traffic data by the application layer detector, and determine the traffic data that has passed the application layer traffic filtering as third data;

a fourth filtering module configured to transmit the third data to a target container connected to the network bridge by the network bridge, conduct transmission layer traffic filtering on the third data based on a transmission layer traffic filtering strategy set in the target container, and determine the traffic data that has passed the transmission layer traffic

filtering as fourth data; and

a second processing module configured to process the fourth data in the target container.

11. An electronic device, characterized in that, the electronic device comprises: a processor, a memory, and a bus, wherein the memory stores a machine-readable instruction executable by the processor, when the electronic device runs, the processor is in communication with the memory by the bus, and when the machine-readable instruction is executed by the processor, steps of the method for controlling traffic transmission according to any one of claims 1-4 or claims 5-8 are executed.

12. A computer-readable storage medium, characterized in that, the computer-readable storage medium stores a computer program, and when a processor runs the computer program, steps of the method for controlling traffic transmission according to any one of claims 1-4 or claims 5-8 are executed.