METHOD AND SYSTEM FOR FORWARDING DATA, VIRTUAL LOAD BALANCER, AND READABLE STORAGE MEDIUM

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present application is the National Stage of International Application No. PCT/CN2017/089481, filed June 22, 2017, which_claims the benefit of China Patent Application No. 201710227252.1, filed April 06, 2017 with the State Intellectual Property Office and entitled “Method and System for Forwarding Data, Virtual Load Balancer, and Computer-readable Storage Medium”, the entirety of which is hereby incorporated herein by reference.

[0002] TECHNICAL FIELD

[0003] The present disclosure relates to the field of communication technology, and more particularly relates to a method and system for forwarding data, as well as a virtual load balancer and a readable storage medium.

[0004] BACKGROUND

[0005] In the cloud platform load balancing process, multiple Virtual Private Network (VPN) routing forwarding tables are required to isolate carriers in order to achieve multi-carrier access. Each VPN routing forwarding table needs to be separately deployed with a virtual load balancer to provide load balancing services for the carrier's traffic data. If the cloud platform has m tenants and each tenant needs to access n carriers, then m*n virtual load balancers need to be deploy to provide load balancing services. At this time, the number of virtual load balancers is positively related to the number of carriers, resulting in too many virtual load balancers required for the cloud platform, and low resource utilization of the virtual load balancer.

[0006] SUMMARY

[0007] It is therefore one main object of the present disclosure to provide a method and a system for forwarding data, as well as a virtual load balancer and a readable storage medium, aiming to solve the technical problem in the prior art that the virtual load balancer has a low resource utilization.

8. A virtual load balancer, the virtual load balancer comprising a memory, a processor, a data forwarding program stored in the memory and performed by the processor, the processor being configured to execute the data forwarding program stored in the memory to perform the following operations:

when receiving a pending response data packet sent by a Linux virtual server LVS from a front terminal sub interface, sending the pending response data packet to a real server RS through a rear terminal sub interface, wherein the forward network port of the VLB corresponds to at least one front terminal sub interface, and one of the front terminal sub interface corresponds to a carrier's data interface; and;

receiving a response data packet from the RS, the RS obtaining the response data packet after receiving and responding to the pending response data packet; and

transmitting the response data packet to the LVS from the front terminal sub interface that receives the pending response data packet.

9. The virtual load balancer of claim 8, further comprising a protocol layer and an application layer, wherein the block of when receiving a pending response data packet sent by a LVS from a front terminal sub interface, sending the pending response data packet to a RS through a rear terminal sub interface comprises:

adding a first identification information to the pending response data packet when the pending response data packet sent by the LVS is received from the front terminal sub interface through the protocol layer;

transmitting the pending response data packet that comprises the first identification information to the application layer, for the application layer to receive the pending response data packet and delete the first identification information from the pending response data packet, and send the pending response data packet to the RS through the rear terminal sub interface according to a default route;

the block of transmitting the response data packet to the LVS from the front terminal sub interface that receives the pending response data packet comprises:

in the application layer, setting a second identification information corresponding

to the first identification information according to a preset parameter;

selecting a routing table according to the second identification information, and sending the response data packet to the LVS from the front terminal sub interface that receives the pending response data packet according to the routing table.

10. The virtual load balancer of claim 8, wherein the block of transmitting the response data packet to the LVS from the front terminal sub interface that receives the pending response data packet comprises:

changing the source address and the destination address of the response data packet, and obtaining a modified response data packet; and

transmitting the modified response packet to the LVS from the front terminal sub interface that receives the pending response data packet.

11. The virtual load balancer of claim 8, wherein prior to the block of when receiving a pending response data packet sent by a LVS from a front terminal sub interface, sending the pending response data packet to a RS through a rear terminal sub interface, the processor is further configured to execute the data forwarding program stored in the memory to perform the following operations:

receiving the pending response data packet after the physical address is modified by the LVS.

12. A computer-readable storage medium that stores one or more programs, which can be executed by one or more processors to perform the following operations:

when receiving a pending response data packet sent by a Linux virtual server LVS from a front terminal sub interface, sending the pending response data packet to a real server RS through a rear terminal sub interface, wherein the forward network port of the VLB corresponds to at least one front terminal sub interface, and one of the front terminal sub interface corresponds to a carrier’s data interface; and

receiving the response data packet from the RS, the RS obtaining the response

data packet after receiving and responding to the pending response data packet; and

transmitting the response data packet to the LVS from the front terminal sub interface that receives the pending response data packet.

13. The computer-readable storage medium of claim 12, wherein the block of when receiving a pending response data packet sent by a LVS from a front terminal sub interface, sending the pending response data packet to a RS through a rear terminal sub interface comprises:

adding a first identification information to the pending response data packet when the pending response data packet sent by the LVS is received from the front terminal sub interface through the protocol layer; and

transmitting the pending response data packet that comprises the first identification information to the application layer, for the application layer to receive the pending response data packet and delete the first identification information from the pending response data packet, and send the pending response data packet to the RS through the rear terminal sub interface according to a default route;

the block of transmitting the response data packet to the LVS from the front terminal sub interface that receives the pending response data packet comprises:

in the application layer, setting a second identification information corresponding to the first identification information according to a preset parameter;

selecting a routing table according to the second identification information, and sending the response data packet to the LVS from the front terminal sub interface that receives the pending response data packet according to the routing table.

14. The computer-readable storage medium of claim 12, wherein the block of transmitting the response data packet to the LVS from the front terminal sub interface that receives the pending response data packet comprises:

changing the source address and the destination address of the response data packet, and obtaining a modified response data packet; and

transmitting the modified response packet to the LVS from the front terminal sub

interface that receives the pending response data packet.

15. The computer-readable storage medium of claim 12, wherein prior to the block of when receiving a pending response data packet sent by a LVS from a front terminal sub interface, sending the pending response data packet to a RS through a rear terminal sub interface, the one or more programs can be executed by the one or more processors to further perform the following operations:

receiving the pending response data packet after the physical address is modified by the LVS.