CLAIMS

What is claimed is:

1. A method for configuring virtual private cloud VPC communication, wherein a first VPC and a second VPC that have a same private network address segment communicate with each other by using an ~~third VPC~~enterprise internal network, and a private network address segment of the ~~third VPC~~enterprise internal network is different from the private network address segment of the first VPC and the private network address segment of the second VPC; and the method comprises:

binding a private network address in the first VPC with a first address, wherein the first address is an address that belongs to the private network address segment of the ~~third VPC~~enterprise internal network;

binding a private network address in the second VPC with a second address, wherein the second address is an address that belongs to the private network address segment of the ~~third VPC~~enterprise internal network, and the first address is different from the second address; and

configuring a source address of a packet sent by the first VPC to the second VPC, as the first address, and configuring a destination address of the packet sent by the first VPC to the second VPC, as the second address.

2. The method according to claim 1, further comprising:

configuring a routing rule on the ~~third VPC~~enterprise internal network, wherein the routing rule on the ~~third VPC~~enterprise internal network comprises: forwarding a packet whose destination address is the first address to the first VPC, and forwarding a packet whose destination address is the second address to the second VPC.

3. The method according to claim 1 or 2, further comprising:

configuring a first gateway on the first VPC, and configuring a second gateway on the second VPC, wherein a private network address of the first gateway is configured as the first address, and a private network address of the second gateway is configured as the second address;

the binding a private network address in the first VPC with a first address comprises: configuring a first packet processing rule on the first gateway, wherein the first packet processing rule comprises: converting a source address of an outbound packet from the address in the first VPC into the first address, and converting a destination address of an inbound packet from the first address into the address in the first VPC; and

the binding a private network address in the second VPC with a second address comprises: configuring a second packet processing rule on the second gateway, wherein the second packet processing rule comprises: converting a source address of the outbound packet from the address in the second VPC into the second address, and converting a destination address of the inbound packet from the second address into the address in the second VPC.

4. The method according to claim 3, further comprising:

configuring a routing rule on a router of the first VPC, wherein the routing rule on the router of the first VPC comprises: forwarding the packet whose destination address is the second address to the first gateway, and forwarding a packet whose destination address is the address in the first VPC to a subnet of the first VPC; and

configuring a routing rule on a router of the second VPC, wherein the routing rule on the router of the second VPC comprises: forwarding the packet whose destination address is the first address to the second gateway, and forwarding a packet whose destination address is the address in the second VPC to the subnet of the first VPC.

5. A method for configuring virtual private cloud VPC communication, wherein a first VPC and a second VPC that have a same private network address segment communicate with each other by using an ~~third VPC~~enterprise internal network, and a private network address segment of the ~~third VPC~~enterprise internal network is different from the private network address segment of the first VPC and the private network address segment of the second VPC; and the method comprises:

configuring a first gateway on the first VPC, and configuring a second gateway on the second VPC, wherein a first address is configured for the first gateway, a second address is configured for the second gateway, the first address and the second address belong to the private network address segment of the ~~third VPC~~enterprise internal network, and the first address is different from the second address;

configuring a first packet processing rule on the first gateway, and configuring a second packet processing rule on the second gateway, wherein the first packet processing rule comprises: converting a source address of an outbound packet from an address in the first VPC into the first address, and converting a destination address of an inbound packet from the first address into the address in the first VPC; and the second packet processing rule comprises: converting a source address of the outbound packet from an address in the second VPC into the second address, and converting a destination address of the inbound packet from the second address into the address in

the second VPC; and

configuring a first routing rule on a router of the first VPC, configuring a second routing rule on a router of the second VPC, and configuring a third routing rule on a router of the ~~third VPC~~enterprise internal network, wherein the first routing rule comprises: routing a packet whose destination address is the second address to the first gateway; the second routing rule comprises: routing a packet whose destination address is the first address to the second gateway; and the third routing rule comprises: routing the packet whose destination address is the first address to the first gateway in the first VPC, and routing the packet whose destination address is the second address to the second gateway in the second VPC.

6. The method according to claim 5, further comprising: configuring a connection relationship between the first VPC and the ~~third VPC~~enterprise internal network, and configuring a connection relationship between the second VPC and the ~~third VPC~~enterprise internal network.

7. A virtual private cloud VPC communication method, wherein a first VPC and a second VPC that have a same private network address segment communicate with each other by using an ~~third VPC~~enterprise internal network, and a private network address segment of the ~~third VPC~~enterprise internal network is different from the private network address segment of the first VPC and the private network address segment of the second VPC; and the method comprises:

sending, by the first VPC, a packet, wherein a source address of the packet is a first address, a destination address of the packet is a second address, both the first address and the second address are addresses that belong to the private network address segment of the ~~third VPC~~enterprise internal network, a private network address in the first VPC is bound with the first address, and a private network address in the second VPC is bound with the second address; and

receiving, by the ~~third VPC~~enterprise internal network, the packet, and forwarding the packet to the second VPC according to a preset routing rule, wherein a routing rule of the ~~third VPC~~enterprise internal network comprises: forwarding a packet whose destination address is the second address to the second VPC.

8. The method according to claim 7, wherein the routing rule further comprises: forwarding a packet whose destination address is the first address to the first VPC; and

the method further comprises:

sending, by the second VPC, a response packet, wherein a source address of the response packet is the second address, and a destination address of the response packet is the first address;

and

receiving, by the ~~third VPC~~enterprise internal network, the response packet, and forwarding the response packet to the first VPC according to the routing rule.

9. A virtual private cloud VPC communication method, wherein a first VPC communicates with a second VPC by using an ~~third VPC~~enterprise internal network, the first VPC and the second VPC have a same private network address segment, and a private network address segment of the ~~third VPC~~enterprise internal network is different from the private network address segment of the first VPC and the private network address segment of the second VPC; a first gateway is configured on the first VPC, a second gateway is configured on the second VPC, a first address is configured for the first gateway, and a second address is configured for the second gateway; both the first address and the second address belong to the private network address segment of the ~~third VPC~~enterprise internal network, and the first address is different from the second address; and the method comprises:

receiving, by a router of the first VPC, a packet sent by a first device, wherein a source address of the packet is a private network address of the first device, and a destination address of the packet is the second address;

forwarding, by the router of the first VPC, the packet to the first gateway according to a first routing rule; and

modifying, by the first gateway, the source address of the packet to the first address, and forwarding a modified packet to a router of the ~~third VPC~~enterprise internal network, wherein a third routing rule is configured on the router of the ~~third VPC~~enterprise internal network, the first routing rule is that a packet whose destination address belongs to the private network address segment of the ~~third VPC~~enterprise internal network needs to be forwarded to the first gateway, and the third routing rule is that a packet whose destination address is the second address needs to be forwarded to the second gateway in the second VPC.

10. The method according to claim 9, further comprising:

receiving, by the second gateway, a packet forwarded by the router of the ~~third VPC~~enterprise internal network, modifying a destination address of the received packet to an address of a second device, and sending a modified packet to a router of the second VPC; and

forwarding, by the router of the second VPC according to a second routing rule, the received packet to a subnet in which the second device is located, wherein the second routing rule is that

the packet whose destination address is the second address needs to be forwarded to the subnet in which the second device is located.

11. A virtual private cloud VPC communication configuration apparatus, wherein a first virtual private cloud VPC and a second VPC that have a same private network address segment communicate with each other by using an ~~third VPC~~enterprise internal network, and a private network address segment of the ~~third VPC~~enterprise internal network is different from the private network address segment of the first VPC and the private network address segment of the second VPC; and the apparatus comprises:

a first configuration module, configured to: bind a private network address in the first VPC with a first address, wherein the first address is an address that belongs to the private network address segment of the ~~third VPC~~enterprise internal network; and bind a private network address in the second VPC with a second address, wherein the second address is an address that belongs to the private network address segment of the ~~third VPC~~enterprise internal network, and the first address is different from the second address; and

a second configuration module, configured to: configure a source address of a packet sent by the first VPC to the second VPC, as the first address; configure a destination address of the packet sent by the first VPC to the second VPC, as the second address; configure a source address of a packet sent by the second VPC to the first VPC, as the second address; and configure a destination address of the packet sent by the second VPC to the first VPC, as the first address.

12. The apparatus according to claim 11, wherein

the second configuration module is configured to configure a routing rule on the ~~third VPC~~enterprise internal network, wherein the routing rule on the ~~third VPC~~enterprise internal network comprises: forwarding a packet whose destination address is the first address to the first VPC, and forwarding a packet whose destination address is the second address to the second VPC.

13. The apparatus according to claim 11 or 12, wherein the second configuration module is configured to:

configure a first gateway on the first VPC, and configure a second gateway on the second VPC, wherein a private network address of the first gateway is configured as the first address, and a private network address of the second gateway is configured as the second address;

configure a first packet processing rule on the first gateway, wherein the first packet processing rule comprises: converting a source address of an outbound packet from the address in

the first VPC into the first address, and converting a destination address of an inbound packet from the first address into the address in the first VPC; and

configure a second packet processing rule on the second gateway, wherein the second packet processing rule comprises: converting a source address of the outbound packet from the address in the second VPC into the second address, and converting a destination address of the inbound packet from the second address into the address in the second VPC.

14. The apparatus according to claim 13, wherein the second configuration module is further configured to:

configure a routing rule on a router of the first VPC, wherein the routing rule on the router of the first VPC comprises: forwarding the packet whose destination address is the second address to the first gateway, and forwarding a packet whose destination address is the address in the first VPC to a subnet in which the address in the first VPC is located; and

configure a routing rule on a router of the second VPC, wherein the routing rule on the router of the second VPC comprises: forwarding the packet whose destination address is the first address to the second gateway, and forwarding a packet whose destination address is the address in the second VPC to the subnet in which the address in the first VPC is located.

15. A virtual private cloud VPC communication configuration apparatus, wherein a first VPC and a second VPC that have a same private network address segment communicate with each other by using an ~~third VPC~~enterprise internal network, and a private network address segment of the ~~third VPC~~enterprise internal network is different from the private network address segment of the first VPC and the private network address segment of the second VPC; and the apparatus comprises:

a first configuration module, configured to: configure a first gateway on the first VPC; configure a second gateway on the second VPC; configure a first address for the first gateway; configure a second address for the second gateway, wherein the first address and the second address belong to the private network address segment of the ~~third VPC~~enterprise internal network, and the first address is different from the second address; configure a first packet processing rule on the first gateway; and configure a second packet processing rule on the second gateway, wherein the first packet processing rule comprises: converting a source address of an outbound packet from an address in the first VPC into the first address, and converting a destination address of an inbound packet from the first address into the address in the first VPC; and the second packet processing

rule comprises: converting a source address of the outbound packet from an address in the second VPC into the second address, and converting a destination address of the inbound packet from the second address into the address in the second VPC; and

a second configuration module, configured to: configure a first routing rule on a router of the first VPC, configure a second routing rule on a router of the second VPC, and configure a third routing rule on a router of the ~~third VPC~~enterprise internal network, wherein the first routing rule comprises: routing a packet whose destination address is the second address to the first gateway; the second routing rule comprises: routing a packet whose destination address is the first address to the second gateway; and the third routing rule comprises: routing the packet whose destination address is the first address to the first gateway in the first VPC, and routing the packet whose destination address is the second address to the second gateway in the second VPC.

16. The apparatus according to claim 15, wherein

the second configuration module is further configured to configure a connection relationship between the first VPC and the ~~third VPC~~enterprise internal network, and configure a connection relationship between the second VPC and the ~~third VPC~~enterprise internal network.

17. A virtual private cloud VPC communications system, comprising a first VPC, a second VPC, and a ~~third VPC~~enterprise internal network, wherein the first VPC and the second VPC have a same private network address segment, the first VPC and the second VPC communicate with each other by using the ~~third VPC~~enterprise internal network, and a private network address segment of the ~~third VPC~~enterprise internal network is different from the private network address segment of the first VPC and the private network address segment of the second VPC;

the first VPC is configured to send a packet, wherein a source address of the packet is a first address, a destination address of the packet is a second address, both the first address and the second address are addresses that belong to the private network address segment of the ~~third VPC~~enterprise internal network, a private network address in the first VPC is bound with the first address, and a private network address in the second VPC is bound with the second address; and

the ~~third VPC~~enterprise internal network is configured to: receive the packet, and forward the packet to the second VPC according to a preset routing rule, wherein a routing rule of the ~~third VPC~~enterprise internal network comprises: forwarding a packet whose destination address is the second address to the second VPC.

18. The system according to claim 17, wherein the routing rule further comprises: forwarding

a packet whose destination address is the first address to the first VPC;

the second VPC is further configured to send a response packet, wherein a source address of the response packet is the second address, and a destination address of the response packet is the first address; and

the ~~third VPC~~enterprise internal network is further configured to: receive the response packet, and forward the response packet to the first VPC according to the routing rule.

19. A virtual private cloud VPC communications system, comprising a first VPC, a second VPC, and a ~~third VPC~~enterprise internal network, wherein the first VPC communicates with the second VPC by using the ~~third VPC~~enterprise internal network, the first VPC and the second VPC have a same private network address segment, and a private network address segment of the ~~third VPC~~enterprise internal network is different from the private network address segment of the first VPC and the private network address segment of the second VPC; a first gateway is configured on the first VPC, a second gateway is configured on the second VPC, a first address is configured for the first gateway, and a second address is configured for the second gateway; and both the first address and the second address belong to the private network address segment of the ~~third VPC~~enterprise internal network, and the first address is different from the second address, wherein

a router of the first VPC is configured to receive a packet sent by a first device, wherein a source address of the packet is a private network address of the first device, and a destination address of the packet is the second address;

the router of the first VPC is further configured to forward the packet to the first gateway according to a first routing rule; and

the first gateway is configured to: modify the source address of the packet to the first address, and forward a modified packet to a router of the ~~third VPC~~enterprise internal network, wherein a third routing rule is configured on the router of the ~~third VPC~~enterprise internal network, the first routing rule is that a packet whose destination address belongs to the private network address segment of the ~~third VPC~~enterprise internal network needs to be forwarded to the first gateway, and the third routing rule is that a packet whose destination address is the second address needs to be forwarded to the second gateway in the second VPC.

20. The system according to claim 19, wherein

the second gateway is configured to: receive a packet forwarded by the router of the ~~third VPC~~enterprise internal network, modify a destination address of the received packet to an address

of a second device, and send a modified packet to a router of the second VPC; and

the router of the second VPC is configured to forward, according to a second routing rule, the received packet to a subnet in which the second device is located, where the second routing rule is that the packet whose destination address belongs to the second address needs to be forwarded to the subnet in which the second device is located.

~~21. A virtual private cloud VPC communications system, comprising a first VPC, a second VPC, and a third VPC, wherein the first VPC communicates with the second VPC by using the third VPC, the first VPC and the second VPC have a same private network address segment, and a private network address segment of the third VPC is different from the private network address segment of the first VPC and the private network address segment of the second VPC; a first gateway connected to the third VPC is configured on the first VPC, a second gateway connected to the third VPC is configured on the second VPC, a first address is configured for the first gateway, and a second address is configured for the second gateway; and both the first address and the second address belong to the private network address segment of the third VPC, and the first address is different from the second address, wherein~~

~~a first virtual machine in a first subnet of the first VPC is configured to send a packet to a switch of the first subnet, wherein a source address of the packet is a private network address of the first virtual machine in the first subnet, and a destination address of the packet is the second address;~~

~~the switch of the first subnet is configured to send the packet to a router of the first VPC;~~

~~the router of the first VPC is configured to: receive the packet, and forward the packet to the first gateway;~~

~~the first gateway is configured to: receive the packet, modify the destination address of the packet to the first address, and send a modified packet to a router of the third VPC;~~

~~the router of the third VPC is configured to: receive the packet, and forward the packet to the second gateway;~~

~~the second gateway is configured to: receive the packet, modify the destination address of the received packet to a private network address, of a second virtual machine in a second subnet of the second VPC, in the second subnet, and send a modified packet to a router of the second VPC;~~

~~the router of the second VPC is configured to: receive the packet, and forward the packet to a switch of the second subnet; and~~

the switch of the second subnet is configured to: receive the packet, and forward the packet to the second virtual machine.

22. A virtual private cloud VPC communications system, comprising a first VPC, a second VPC, and a third VPC, wherein the first VPC communicates with the second VPC by using the third VPC, the first VPC and the second VPC have a same private network address segment, a private network address segment of the third VPC is different from the private network address segment of the first VPC and the private network address segment of the second VPC, a first remote connection gateway remotely connected to a first data center on premise and a first gateway connected to the third VPC are configured on the first VPC, a second remote connection gateway remotely connected to a second data center on premise and a second gateway connected to the third VPC are configured on the second VPC, a first address is configured for the first gateway, a second address is configured for the second gateway, both the first address and the second address belong to the private network address segment of the third VPC, and the first address is different from the second address, wherein

the first remote connection gateway is configured to: receive a packet sent by a first device in a first subnet of the first data center on premise, and send the packet to a router of the first VPC, wherein a source address of the packet is a private network address of the first device in the first subnet, and a destination address of the packet is the second address;

the router of the first VPC is configured to: receive the packet, and forward the packet to the first gateway;

the first gateway is configured to: receive the packet, modify the destination address of the packet to the first address, and send a modified packet to a router of the third VPC;

the router of the third VPC is configured to: receive the packet, and forward the packet to the second gateway;

the second gateway is configured to: receive the packet, modify the destination address of the received packet to a private network address, of a second device in a second subnet of the second data center on premise, in the second subnet, and send a modified packet to a router of the second VPC;

the router of the second VPC is configured to: receive the packet, and forward the packet to the second remote connection gateway; and

the second remote connection gateway is configured to receive the packet, and send the packet

to the second device in the second subnet of the second data center on premise.

23. A virtual private cloud VPC communications system, comprising a first VPC, a second VPC, and a third VPC, wherein the first VPC communicates with the second VPC by using the third VPC, the first VPC and the second VPC have a same private network address segment, and a private network address segment of the third VPC is different from the private network address segment of the first VPC and the private network address segment of the second VPC; a first gateway is configured on the first VPC, a second gateway is configured on the second VPC, a first address is configured for the first gateway, and a second address is configured for the second gateway; and both the first address and the second address belong to the private network address segment of the third VPC, a router of the first VPC and a router of the second VPC are separately connected to a router of the third VPC, and the first address is different from the second address, wherein

a first virtual machine in a first subnet of the first VPC is configured to send a packet to a switch of the first subnet, wherein a source address of the packet is a private network address of the first virtual machine in the first subnet, and a destination address of the packet is the second address;

the switch of the first subnet is configured to send the packet to the first gateway;

the first gateway is configured to: modify the source address of the packet to the first address, and send a modified packet to the router of the first VPC;

the router of the first VPC is configured to: receive the packet, and forward the packet to the router of the third VPC;

the router of the third VPC is configured to: receive the packet, and forward the packet to the router of the second VPC;

the router of the second VPC is configured to: receive the packet, and forward the packet to the second gateway;

the second gateway is configured to: receive the packet, modify the destination address of the received packet to a private network address, of a second virtual machine in a second subnet of the second VPC, in the second subnet, and send a modified packet to a switch of the second subnet; and

the switch of the second subnet is configured to: receive the packet, and forward the packet to the second virtual machine.

24. A method for configuring virtual private cloud VPC communication, wherein a first VPC and a second VPC that have a same private network address segment communicate with each other by using a third VPC, and a private network address segment of the third VPC is different from the private network address segment of the first VPC and the private network address segment of the second VPC; and the method comprises:

providing a first configuration page to a user in the first VPC, wherein the first configuration page prompts the user in the first VPC to create a first gateway on the first VPC, and prompts the user in the first VPC to enter information about the third VPC to which the first gateway needs to be connected and a first address of the first gateway in the third VPC;

providing a second configuration page to a user in the second VPC, wherein the second configuration page prompts the user in the second VPC to create a second gateway on the second VPC, and prompts the user in the second VPC to enter the information about the third VPC to which the second gateway needs to be connected and a second address of the second gateway in the third VPC; and the first address and the second address belong to the private network address segment of the third VPC, and the first address is different from the second address;

creating the first gateway based on information about the first configuration page; and

creating the second gateway based on information about the second configuration page.

25. The method according to claim 24, further comprising:

configuring a first packet processing rule on the first gateway, and configuring a second packet processing rule on the second gateway, wherein the first packet processing rule comprises: converting a source address of an outbound packet from an address in the first VPC into the first address, and converting a destination address of an inbound packet from the first address into the address in the first VPC; and the second packet processing rule comprises: converting a source address of the outbound packet from an address in the second VPC into the second address, and converting a destination address of the inbound packet from the second address into the address in the second VPC; and

configuring a first routing rule on a router of the first VPC, configuring a second routing rule on a router of the second VPC, and configuring a third routing rule on a router of the third VPC, wherein the first routing rule comprises: routing a packet whose destination address is the second address to the first gateway; the second routing rule comprises: routing a packet whose destination address is the first address to the second gateway; and the third routing rule comprises: routing the

~~packet whose destination address is the first address to the first gateway in the first VPC, and routing the packet whose destination address is the second address to the second gateway in the second VPC.~~

~~26. A computing device, comprising at least one memory and at least one processor, wherein the at least one memory is configured to store a program instruction, and the at least one processor executes the program instruction to perform the method according to any one of claims 1 to 4.~~

~~27. A computing device, comprising at least one memory and at least one processor, wherein the at least one memory is configured to store a program instruction, and the at least one processor executes the program instruction to perform the method according to any one of claims 5 to 8.~~