CLAIMS

What is claimed is:

1. A method for controlling a LAN service, performed by a network communications device and comprising:

obtaining LAN-service-related information related to a terminal, wherein the LAN-service-related information comprises at least one of the following: a LAN service capability of the terminal, location information of the terminal, LAN service subscription information, or LAN service request information; and

performing a first related operation of a LAN service based on the LAN-service-related information;

wherein the LAN service is a private communication service provided on a communications network for a group of terminals;

wherein the first related operation of the LAN service comprises configuring LAN-related route selection policy information for the terminal;

wherein the LAN-related route selection policy information comprises at least one of the following:

data network name DNN information of a LAN associated with an application; or

slice information of the LAN associated with the application.

2. The method for controlling a LAN service according to claim 1, wherein the first related operation of the LAN service further comprises at least one of the following:

configuring LAN-service-related configuration information for the terminal;

configuring LAN-service-relay-related configuration information for the terminal;

transmitting the LAN-service-related configuration information;

transmitting the LAN-service-relay-related configuration information;

transmitting the LAN-related route selection policy information;

transmitting LAN-related information of a LAN that the terminal is allowed to join; or

transmitting LAN-related information of a LAN that the terminal is not allowed to join.

3. The method for controlling a LAN service according to claim 2, wherein the LAN-service-related configuration information comprises at least one of the following:

information about whether the LAN service is allowed;

service scope information of the LAN service;

LAN-related information of a LAN allowed to join;

LAN-related information of a LAN not allowed to join;

information of a DNN supporting the LAN service; or

information of a slice supporting the LAN service.

4. The method for controlling a LAN service according to claim 2, wherein the LAN-service-relay-related configuration information comprises at least one of the following:

information about whether serving as a LAN service relay is allowed;

service scope information of the LAN service relay;

LAN-relay-related information of a LAN that allows relaying;

LAN-relay-related information of a LAN that does not allow relaying;

LAN-related information of the LAN that allows relaying; or

LAN-related information of the LAN that does not allow relaying.

5. The method for controlling a LAN service according to claim 2, wherein the LAN-related route selection policy information further comprises at least one of the following:

whether an application is allowed to access the LAN service;

LAN-related information of a LAN that the application is allowed to access; or

LAN-related information of a LAN that the application is not allowed to access

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6. A method for controlling a LAN service, performed by a terminal and comprising:

obtaining first information, wherein the first information comprises LAN-related route selection policy information; and

performing a second related operation of a LAN service based on the first information;

wherein the LAN service is a private communication service provided on a communications network for a group of terminals;

wherein the LAN-related route selection policy information comprises at least one of the following:

data network name DNN information of a LAN associated with the application; or

slice information of the LAN associated with the application;

wherein the second related operation of the LAN service comprises at least one of the following:

joining a LAN;

leaving the LAN;

performing one-to-one communication within the LAN;

performing one-to-many communication within the LAN; or

providing a relay service for a communications device within the LAN.

7. The method for controlling a LAN service according to claim 6, wherein the first information further comprises at least one of the following: LAN-service-related configuration

information, or LAN-service-relay-related configuration information.

8. The method for controlling a LAN service according to claim 6, wherein the LAN-service-related configuration information comprises at least one of the following:

information about whether the LAN service is allowed;

service scope information of the LAN service;

LAN-related information of a LAN allowed to join;

LAN-related information of a LAN not allowed to join;

information of a DNN supporting the LAN service; or

information of a slice supporting the LAN service.

9. The method for controlling a LAN service according to claim 8, wherein the LAN-related information comprises at least one of the following:

LAN identification information;

whether multicast is allowed;

communication address information for multicast in a LAN;

communication address information of the terminal in the LAN;

service scope information of the LAN;

information of a communications device within the LAN;

information of a DNN supporting the LAN; or

information of a slice supporting the LAN.

10. The method for controlling a LAN service according to claim 9, wherein the LAN identification information comprises at least one of the following:

a LAN identifier at an application layer;

a LAN identifier in a communications network; or

a LAN identifier at a transport layer.

11. The method for controlling a LAN service according to claim 9, wherein the communication address information comprises at least one of the following: a port, a media access control MAC address, an IP address, or information of a virtual private communications network VLAN; and/or

the information of the communications device within the LAN comprises communication address information of the communications device within the LAN.

12. The method for controlling a LAN service according to claim 7, wherein the LAN-service-relay-related configuration information comprises at least one of the following:

information about whether serving as a LAN service relay is allowed;

service scope information of the LAN service relay;

LAN-relay-related information of a LAN that allows relaying;

LAN-relay-related information of a LAN that does not allow relaying;

LAN-related information of the LAN that allows relaying; or

LAN-related information of the LAN that does not allow relaying.

13. The method for controlling a LAN service according to claim 12, wherein

the LAN-relay-related information comprises at least one of the following:

LAN identification information;

whether multicast is allowed;

communication address information for multicast in a LAN;

communication address information of the terminal in the LAN;

service scope information of the LAN;

information of a communications device within the LAN;

communication address information of the terminal serving as a relay in the LAN;

service scope information of a LAN relay; or

information of a communications device that the LAN relay is allowed to access.

14. The method for controlling a LAN service according to claim 6, wherein the LAN-related route selection policy information further comprises at least one of the following:

whether an application is allowed to access the LAN service;

LAN-related information of a LAN that the application is allowed to access; or

LAN-related information of a LAN that the application is not allowed to access

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15. The method for controlling a LAN service according to claim 6, wherein the providing a relay service for a communications device within the LAN comprises at least one of the following:

adding, to a data packet of the relayed communications device, information of a VLAN corresponding to the LAN;

transmitting a request for joining the LAN for the relayed communications device; or

transmitting a request for leaving the LAN for the relayed communications device.

16. A network communications device, comprising:

an obtaining module, configured to obtain LAN-service-related information related to a terminal, wherein the LAN-service-related information comprises at least one of the following: a LAN service capability of the terminal, location information of the terminal, LAN service subscription information, or LAN service request information; and

an execution module, configured to perform a first related operation of a LAN service based

on the LAN-service-related information;

wherein the LAN service is a private communication service provided on a communications network for a group of terminals;

wherein the first related operation of the LAN service comprises configuring LAN-related route selection policy information for the terminal;

wherein the LAN-related route selection policy information comprises at least one of the following:

data network name DNN information of a LAN associated with an application; or

slice information of the LAN associated with the application.

17. The network communications device according to claim 16, wherein the first related operation of the LAN service further comprises at least one of the following:

configuring LAN-service-related configuration information for the terminal;

configuring LAN-service-relay-related configuration information for the terminal;

transmitting the LAN-service-related configuration information;

transmitting the LAN-service-relay-related configuration information;

transmitting the LAN-related route selection policy information;

transmitting LAN-related information of a LAN that the terminal is allowed to join; or

transmitting LAN-related information of a LAN that the terminal is not allowed to join.

18. The network communications device according to claim 17, wherein the LAN-service-related configuration information comprises at least one of the following:

information about whether the LAN service is allowed;

service scope information of the LAN service;

LAN-related information of a LAN allowed to join;

LAN-related information of a LAN not allowed to join;

information of a DNN supporting the LAN service; or

information of a slice supporting the LAN service.

19. The network communications device according to claim 17, wherein the LAN-service-relay-related configuration information comprises at least one of the following:

information about whether serving as a LAN service relay is allowed;

service scope information of the LAN service relay;

LAN-relay-related information of a LAN that allows relaying;

LAN-relay-related information of a LAN that does not allow relaying;

LAN-related information of the LAN that allows relaying; or

LAN-related information of the LAN that does not allow relaying.

20. A terminal, comprising:

an obtaining module, configured to obtain first information, wherein the first information comprises LAN-related route selection policy information; and

an execution module, configured to perform a second related operation of a LAN service based on the first information;

wherein the LAN service is a private communication service provided on a communications network for a group of terminals;

wherein the LAN-related route selection policy information comprises at least one of the following:

data network name DNN information of a LAN associated with the application; or

slice information of the LAN associated with the application;

wherein the second related operation of the LAN service comprises at least one of the following:

joining a LAN;

leaving the LAN;

performing one-to-one communication within the LAN;

performing one-to-many communication within the LAN; or

providing a relay service for a communications device within the LAN.