CLAIMS

What is claimed is:

1. A method for splitting end-to-end quality of service QoS requirement information, wherein the method comprises:

splitting, by a target device, end-to-end QoS requirement information into PC5-segment QoS information and Uu-segment QoS information, wherein the target device comprises at least one of a target UE and an access network device;

wherein the splitting, by a target device, end-to-end QoS requirement information into PC5-segment QoS information and Uu-segment QoS information comprises:

splitting, by the target UE, the end-to-end QoS requirement information into the PC5-segment QoS information and the Uu-segment QoS information based on a first mapping relationship or first information, wherein

the first mapping relationship comprises a mapping relationship between the end-to-end QoS requirement information and the PC5-segment QoS information and Uu-segment QoS information; and

the first information comprises a QoS parameter of a PC5 interface and a QoS parameter of a Uu interface that are detected by the target UE.

2. The method according to claim 1, wherein the PC5-segment QoS information and the Uu-segment QoS information satisfy the end-to-end QoS requirement information.

3. The method according to claim 1, wherein the PC5-segment QoS information comprises a PC5-segment QoS parameter and a PC5-segment QoS attribute, the PC5-segment QoS parameter comprises a PC5 QoS identifier PQI, and the PC5-segment QoS attribute comprises a PDB; and the Uu-segment QoS information comprises a Uu-segment QoS parameter and a Uu-segment QoS attribute, the Uu-segment QoS parameter comprises a 5G QoS identifier 5QI, and the Uu-segment QoS attribute comprises a PDB.

4. The method according to claim 2, wherein in a case that the target UE is a remote UE, after the splitting, by a target device, end-to-end QoS requirement information into PC5-segment QoS information and Uu-segment QoS information, the method further comprises:

sending, by the remote UE, the Uu-segment QoS information and the PC5-segment QoS information to a relay UE, wherein

the Uu-segment QoS information is used by the relay UE to establish a corresponding Uu-segment QoS flow in a PDU session establishment or modification procedure; and the PC5-segment QoS information is used by the relay UE to establish a corresponding PC5-segment QoS flow in a direct link modification procedure.

5. The method according to claim 2, wherein in a case that the target UE is relay UE, before the splitting, by a target device, end-to-end QoS requirement information into PC5-segment QoS information and Uu-segment QoS information, the method further comprises:

receiving, by the relay UE, the end-to-end QoS requirement information from remote UE; and

after the splitting, by a target device, end-to-end QoS requirement information into PC5-segment QoS information and Uu-segment QoS information, the method further comprises:

initiating, by the relay UE, a PDU session establishment or modification procedure based on the Uu-segment QoS information to establish a corresponding Uu-segment QoS flow, and initiating, by the relay UE, a direct link modification procedure based on the PC5-segment QoS information to establish a corresponding PC5-segment QoS flow.

6. The method according to claim 1, wherein the first mapping relationship is configured by a network side or preconfigured.

7. The method according to claim 1, wherein in a case that the target device is the access network device, after the splitting, by a target device, end-to-end QoS requirement information into PC5-segment QoS information and Uu-segment QoS information, the method further comprises:

establishing, by the access network device, a PC5-segment bearer based on the PC5-segment QoS information, and establishing a Uu-segment bearer based on the Uu-segment QoS information.

8. The method according to claim 1, wherein in a case that the target device is the access network device, the splitting, by a target device, end-to-end QoS requirement information into PC5-segment QoS information and Uu-segment QoS information comprises:

splitting, by the access network device, the end-to-end QoS requirement information into the PC5-segment QoS information and the Uu-segment QoS information based on a second mapping relationship or second information, wherein

the second mapping relationship comprises a mapping relationship between the end-to-end QoS requirement information and the PC5-segment QoS information and Uu-segment QoS information; and

the second information comprises a QoS parameter of a PC5 interface and a QoS parameter of a Uu interface that are detected by the access network device.

9. A method for splitting end-to-end QoS requirement information, wherein the method comprises:

splitting, by a target core network device, end-to-end QoS requirement information to obtain PC5-segment QoS information and Uu-segment QoS information; and

before the splitting, by a target core network device, end-to-end QoS requirement information, receiving the end-to-end QoS requirement information from relay UE, wherein the end-to-end QoS requirement information is sent by remote UE to the relay UE; or after the splitting, by a target core network device, end-to-end QoS requirement information, sending the PC5-segment QoS information and the Uu-segment QoS information to an access network device, wherein

the PC5-segment QoS information comprises a PC5-segment QoS parameter and a PC5-segment QoS attribute, the PC5-segment QoS parameter comprises a PQI, and the PC5-segment QoS attribute comprises a PDB; and the Uu-segment QoS information comprises a Uu-segment QoS parameter and a Uu-segment QoS attribute, the Uu-

segment QoS parameter comprises a 5QI, and the Uu-segment QoS attribute comprises a PDB;

wherein the target core network device comprises a first core network device and a second core network device, and the splitting, by a target core network device, end-to-end QoS requirement information to obtain PC5-segment QoS information and Uu-segment QoS information comprises:

splitting, by the first core network device, the end-to-end QoS requirement information to obtain the PC5-segment QoS information and a first rule; and

sending, by the first core network device, the PC5-segment QoS information and the first rule to the second core network device, wherein the first rule is used by the second core network device to generate the Uu-segment QoS information.

10. The method according to claim 9, wherein the splitting, by the first core network device, the end-to-end QoS requirement information to obtain the PC5-segment QoS information and a first rule comprises:

splitting, by the first core network device, the end-to-end QoS requirement information based on target information to obtain the PC5-segment QoS information and the first rule, wherein

the target information comprises at least one of the following: subscription information of the remote UE, subscription information of the relay UE, a payment policy, relay communication policy information authorized by the remote UE, and relay communication policy information authorized by the relay UE.

11. The method according to claim 9, wherein in a case that the target core network device comprises a first core network device, the splitting, by a target core network device, end-to-end QoS requirement information to obtain PC5-segment QoS information and Uu-segment QoS information comprises:

splitting, by the first core network device, the end-to-end QoS requirement information to obtain a first rule and the PC5-segment QoS information.

12. The method according to claim 9, wherein in a case that the target core network device comprises a first core network device, the receiving the end-to-end QoS requirement information from relay UE comprises:

receiving, by the first core network device, the end-to-end QoS requirement information forwarded by the relay UE through a second core network device, wherein the end-to-end QoS requirement information is sent by the remote UE to the relay UE.

13. The method according to claim 9, wherein the target core network device comprises a second core network device, and before the sending the PC5-segment QoS information and the Uu-segment QoS information to an access network device, the splitting, by a target core network device, end-to-end QoS requirement information to obtain PC5-segment QoS information and Uu-segment QoS information comprises:

splitting, by the second core network device, the end-to-end QoS requirement information to obtain the PC5-segment QoS information and the Uu-segment QoS information.

14. The method according to claim 13, wherein the splitting, by the second core network device, the end-to-end QoS requirement information to obtain the PC5-segment QoS information and the Uu-segment QoS information comprises:

splitting, by the second core network device, the end-to-end QoS requirement information based on target information to obtain the PC5-segment QoS information and the Uu-segment QoS information, wherein

the target information comprises at least one of the following: subscription information of the remote UE, subscription information of the relay UE, a payment policy, relay communication policy information authorized by the remote UE, and relay communication policy information authorized by the relay UE.

15. The method according to claim 9, wherein the sending the PC5-segment QoS information and the Uu-segment QoS information to an access network device comprises:

sending, by the target core network device, the PC5-segment QoS information and the Uu-segment QoS information to the access network device in a PDU session establishment procedure and a direct link modification procedure.

16. The method according to any one of claims 9 to 15, wherein the PC5-segment QoS information comprises a PC5-segment QoS text, and the Uu-segment QoS information comprises a Uu-segment QoS text.

17. A terminal, comprising a processor, a memory, and a program or instructions stored in the memory and capable of running on the processor, wherein when the program or instructions are executed by the processor, the steps of the method for splitting end-to-end QoS requirement information according to any one of claims 1 to 8 are implemented, or the method for splitting end-to-end QoS requirement information according to any one of claims 9 to 16 is implemented.

18. A network-side device, comprising a processor, a memory, and a program or instructions stored in the memory and capable of running on the processor, wherein when the program or instructions are executed by the processor, the steps of the method for splitting end-to-end QoS requirement information according to any one of claims 1 to 8 are implemented, or the method for splitting end-to-end QoS requirement information according to any one of claims 9 to 16 is implemented.