CLAIMS

1. A data packet processing method, comprising:

obtaining first information and second information of a first Segment ID (SID), the first information being used for indicating a position of a container where the first SID is located in an SID list of a data packet, and the second information being used for indicating a position of the first SID in the container;

obtaining a position of the first SID in the SID list according to the first information and the second information;

copying the first SID to a Destination Address (DA) of the data packet, and sending the data packet.

2. The method of claim 1, wherein obtaining the first information and the second information of the first SID comprises:

obtaining third information and fourth information of a second SID, the third information being used for indicating a position of a container where the second SID is located in the SID list of the data packet, and the fourth information being used for indicating a position of the second SID in the container;

obtaining the first information and the second information of the first SID according to the third information and the fourth information of the second SID.

3. The method of claim 2, wherein obtaining the third information and the fourth information of the second SID comprises:

obtaining the third information of the second SID from a Segment Routing Header (SRH) of the data packet; and

obtaining an index of the second SID from the DA of the data packet, wherein the

index of the second SID comprises the fourth information.

4. The method of claim 2, wherein obtaining the first information and the second information of the first SID according to the third information and the fourth information of the second SID comprises:

determining whether the first SID and the second SID are in the same container according to the fourth information of the second SID or flavor of the second SID; and

in response to the first SID and the second SID being in the same container, the first information of the first SID being the same as the third information of the second SID, obtaining the second information of the first SID according to the fourth information of the second SID; or,

in response to the first SID and the second SID not being in the same container, obtaining the first information of the first SID according to the third information of the second SID, and determining the second information of the first SID according to an SID type of the first SID.

5. The method of claim 4, wherein the SID type of the first SID is indicated by the flavor of the second SID.

6. The method of claim 1, further comprising:

updating the first information of the first SID to an SRH of the data packet;

updating the second information of the first SID to the DA of the data packet as an index of the first SID.

7. The method of claim 1, wherein copying the first SID to the DA of the data packet, and sending the data packet comprises:

copying the first SID to the DA of the data packet, combining the first SID with a common prefix or an address block in the DA to get a new DA, and forwarding the data packet to a next endpoint according to the new DA;

or,

copying the first SID and the second information to the DA of the data packet, combining the first SID and the second information with the common prefix or the address block in the DA to get a new DA, and forwarding the data packet to a next endpoint according to the new DA;

or,

copying the first SID and the second information to the DA of the data packet, and forwarding the data packet to the next endpoint.

8. The method of claim 1, wherein obtaining the first information and the second information of the first SID comprises:

obtaining third information, fourth information and fifth information of the second SID, the third information being used for indicating a position of a container where the second SID is located in the SID list of the data packet, the fourth information being used for indicating a position of the second SID in the container, and the fifth information being used for indicating at least one of: an SID type of the second SID, or whether the second SID is compressed;

obtaining the first information and the second information of the first SID according to the third information, the fourth information and the fifth information of the second SID;

wherein the second SID is an SID immediately before the first SID in the SID list.

9. The method of claim 8, wherein obtaining the third information, the fourth information and the fifth information of the second SID comprises:

obtaining the third information of the second SID from the SRH of the data packet;

obtaining an index of the second SID from the DA of the data packet, wherein the index of the second SID comprises the fourth information and the fifth information.

10. The method of claim 8, wherein obtaining the first information and the second information of the first SID according to the third information, the fourth information and the fifth information of the second SID comprises:

determining whether the first SID and the second SID are in the same container according to the SID type of the second SID and an SID type of the first SID; and

in response to the first SID and the second SID being in the same container, the first information of the first SID being the same as the third information of the second SID, obtaining the second information of the first SID according to the fourth information of the second SID; or,

in response to the first SID and the second SID not being in the same container, obtaining the first information of the first SID according to the third information of the second SID, and determining the second information of the first SID according to the SID type of the first SID.

11. The method of claim 1, wherein the container is used for containing a standard SID or multiple compressed SIDs; the compressed SID comprises a node ID and a value of function of the node.

12. The method of claim 1, wherein the first SID is a compressed SID, and an index of the first SID is placed after the compressed SID in the DA.

13. The method of claim 12, wherein the index of the first SID is placed at Least Significant Bits (LSBs) of the DA.

~~12~~14. A node, comprising:

an obtaining module, configured to obtain first information and second information of a first Segment ID (SID), the first information being used for indicating a position of a container where the first SID is located in an SID list of a data packet, and the second information being used for indicating a position of the first SID in the container;

a processing module, configured to obtain a position of the first SID in the SID list according to the first information and the second information; and

a sending module, configured to copy the first SID to a Destination Address (DA) of the data packet, and send the data packet.

~~13~~15. A node, comprising: a transceiver, a processor and a memory configured to store a computer program capable of running in the processor;

the transceiver is configured to send and receive data under control of the processor;

the processor is configured to execute, when reading the computer program in the memory, steps in the method for data packet processing of any one of claims 1 to ~~11~~13.

~~14~~16. A computer-readable storage medium, in which a computer program is stored, wherein the computer program, when executed by a processor, executes steps in the method for data packet processing of any one of claims 1 to ~~11~~13.