WHAT IS CLAIMED IS:

1. A method for quality of service processing of a network data packet, comprising:

invoking a data packet filtering module to obtain a type of service field value corresponding to a socket;

caching the type of service field value into metadata of the socket; and

performing a packaging processing on the network data packet after routing based on the cached type of service field value.

2. The method according to claim 1, wherein the method further comprises:

adding the data packet filtering module in a kernel mode, wherein the data packet filtering module is configured to update a type of service field chart of a user mode; and

adding an invoking point of the data packet filtering module in a quality of service processing course for a network data packet of a protocol stack in the kernel mode, and invoking the data packet filtering module at the invoking point through the socket after a first routing to obtain the type of service field value and cache the type of service field value into the metadata of the socket;

wherein the type of service field chart comprises a corresponding relationship between a quadruple of the network data packet and the type of service field value.

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

triggering a configuration file or a command line parameter corresponding to the network data packet in the user mode to determine the corresponding relationship; and

writing the corresponding relationship into the type of service field chart.

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

determining a type of service field value of the network data packet after packaging; and

performing a classification control processing on the network data packet after packaging according to the type of service field value.

5. The method according to any one of claims 1 to 4, wherein,

the data packet filtering module comprises an extended Berkeley Packet Filter (eBPF) module.

6. The method according to any one of claims 1 to 4, wherein,

the type of service field value comprises a type of service (ToS) value.

7. The method according to any one of claims 1 to 4, wherein,

the quadruple comprises a source IP address, a source port, a target IP address, and a target port corresponding to the network data packet.

8. An apparatus for quality of service processing of a network data packet, comprising:

an invoking module, configured to invoke a data packet filtering module to obtain a type of service field value corresponding to a socket;

a cache module, configured to cache the type of service field value into metadata of the socket; and

a packaging module, configured to perform a packaging processing on the network data packet after routing based on the cached type of service field value.

9. An electronic device, comprising:

a memory; and

a processor, coupled to the memory, wherein the processor is configured to perform the method for quality of service processing of the network data packet according to any one of claims 1 to 7 based on an instruction stored in the memory.

10. A computer-readable storage medium, wherein a program is stored the computer-readable storage medium; when the program is executed by a processor, the method for quality of service processing of the network data packet according to any one of claims 1 to 7 is implemented.