CLAIMS

What is claimed is

1. A data processing method based on a para-virtualization device, comprising:

acquiring a plurality of initial data stored in a completion queue of the para-virtualization device, wherein the plurality of initial data is used to characterize descriptive information of raw data which has been processed by the para-virtualization device but not been submitted to a host,

characterized in that the descriptive information comprises addresses and lengths associated with the raw data;

the method further comprises:

determining a plurality of first data that satisfy a preset condition among the plurality of initial data;

performing an aggregation operation on the plurality of first data to generate a first aggregation result, wherein the aggregation operation comprises splicing descriptive information corresponding to the plurality of first data, which comprises at least one of: splicing addresses in the descriptive information corresponding to the plurality of first data, and summing lengths in the descriptive information corresponding to the plurality of first data;

sending a direct memory access request carrying the first aggregation result to a memory of the host.

2. The method according to claim 1, wherein determining the plurality of first data that satisfy the preset condition among the plurality of initial data comprises at least one of the following:

acquiring data stored in a target buffer to obtain the plurality of first data, wherein the plurality of initial data are sequentially cached to the target buffer;

determining the plurality of initial data as the plurality of first data in a case where a preset time arrives;

determining the plurality of initial data as the plurality of first data in a case where the amount of the plurality of initial data is greater than or equal to a preset

amount.

3. The method according to claim 1 or 2, wherein performing the aggregation operation on the plurality of first data to generate the first aggregation result comprises:

determining a first transmission queue corresponding to each first data, wherein the first transmission queue is used to transmit the raw data;

acquiring first data corresponding to a same first transmission queue to obtain the first aggregation result.

4. The method according to claim 3, wherein acquiring the first data corresponding to the same first transmission queue to obtain the first aggregation result comprises:

determining a first transmission queue corresponding a first one of the first data among the plurality of first data to obtain a target transmission queue;

acquiring first data corresponding to the target transmission queue among the plurality of first data to obtain the first aggregation result.

5. The method according to any one of claims 1 to 4, further comprising:

determining a plurality of second data among the plurality of initial data on the basis of an initial queue identification corresponding to the completion queue, wherein the initial queue identification is used to characterize identification information of data that has been submitted, and the plurality of second data are used to characterize data currently submitted to the host;

performing an aggregation operation on the plurality of second data to obtain a second aggregation result;

updating the initial queue identification on the basis of the second aggregation result.

6. The method according to claim 5, wherein performing the aggregation operation on the plurality of second data to obtain the second aggregation result comprises:

determining a second transmission queue corresponding to each second data;

acquiring second data corresponding to a same second transmission queue to obtain the second aggregation result.

7. The method according to any one of claims 1 to 6, further comprising:

acquiring a plurality of raw data;

determining a third transmission queue corresponding to each raw data;

sequencing the plurality of raw data according to the third transmission queue to obtain sequenced data, wherein raw data corresponding to a same third transmission queue are adjacent;

sequentially writing the sequenced data into a data buffer of the host.

8 A data processing system based on a para-virtualization device, comprising:

a host, comprising a memory and a completion queue;

the para-virtualization device connected with the host for acquiring a plurality of initial data stored in the completion queue, wherein the plurality of initial data is used to characterize descriptive information of raw data which has been processed by the para-virtualization device but not been submitted to the host,

characterized in that the descriptive information comprises addresses and lengths associated with the raw data;

wherein the para-virtualization device is further configured for determining a plurality of first data that satisfy a preset condition among the plurality of initial data; performing an aggregation operation on the plurality of first data to generate a first aggregation result, wherein the aggregation operation comprises splicing descriptive information corresponding to the plurality of first data, which comprises at least one of: splicing addresses in the descriptive information corresponding to the plurality of first data, and summing lengths in the descriptive information corresponding to the plurality of first data; sending a direct memory access request carrying the first aggregation result to the memory of the host.

9. A computer-readable storage medium comprising a stored program, wherein the program, when executed by a processor, controls a device in which the computer-readable storage medium is located to execute the data processing method based on the para-virtualization device of any one of claims 1-7.

10. A computer terminal, comprising: a memory and a processor, the processor being used to run a program stored in the memory, wherein the program, when

executed by a processor, executes the data processing method based on the para-virtualization device of any one of claims 1-7.