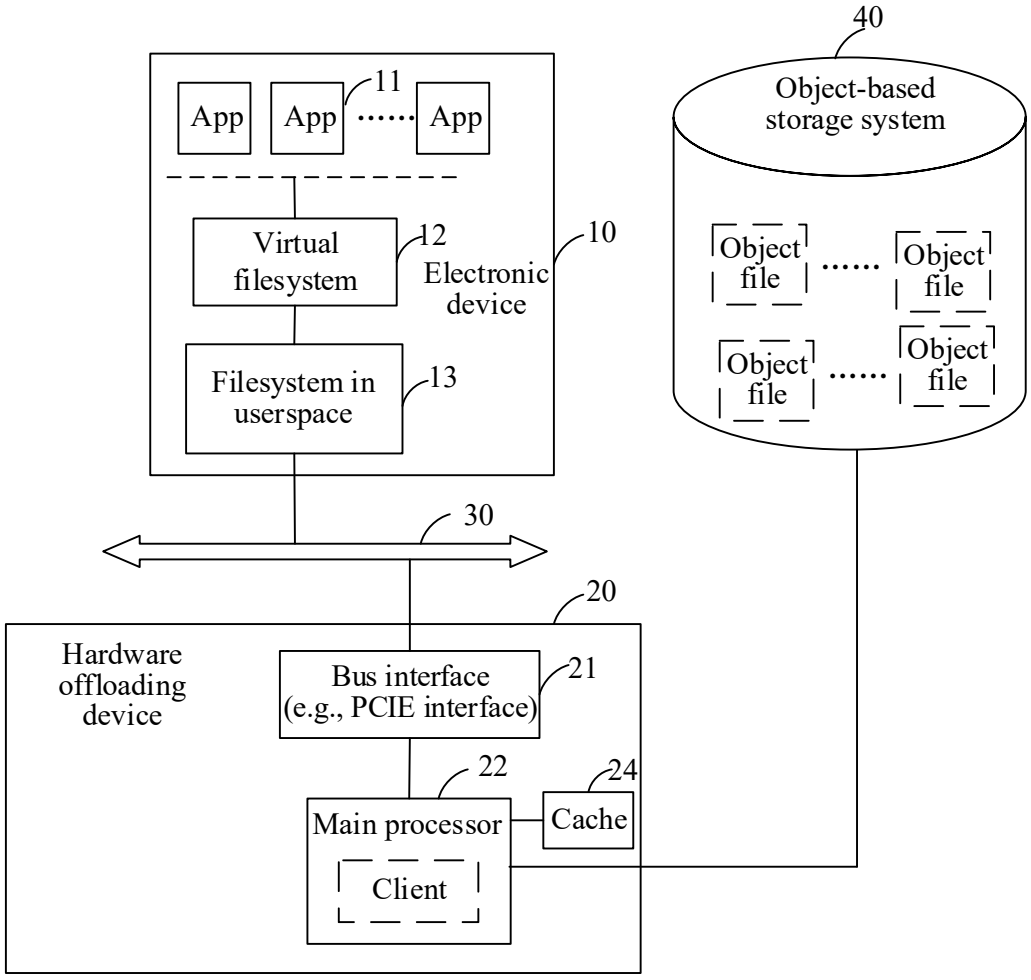

40
Object-based storage system
Object file
Object file
Object file
Object file
App
App
App
11
Virtual filesystem
12
Electronic device
10
Filesystem in userspace
13
30
20
Hardware offloading device
Bus interface (e.g., PCIE interface)
21
22
24
Main processor
Cache
Client

FIG. 1

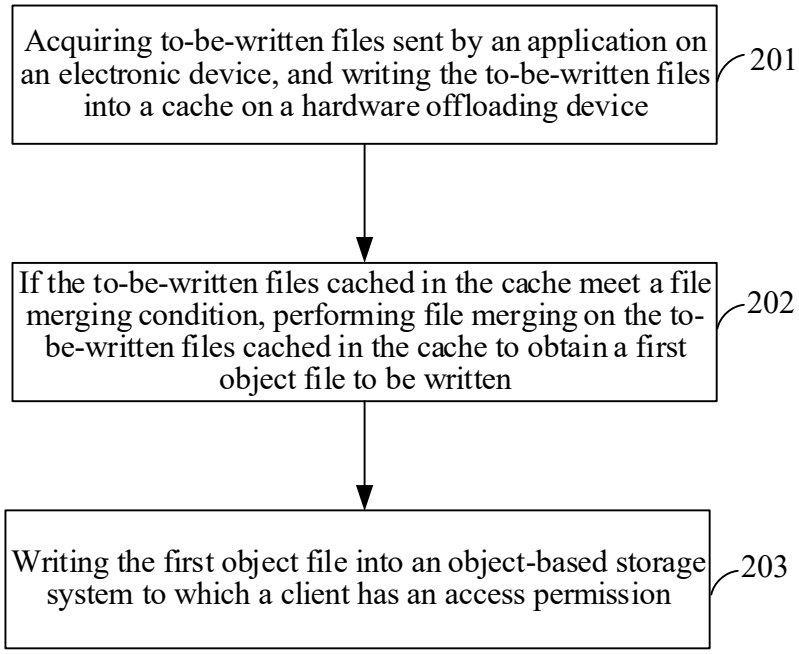

Acquiring to-be-written files sent by an application on an electronic device, and writing the to-be-written files into a cache on a hardware offloading device
201
If the to-be-written files cached in the cache meet a file merging condition, performing file merging on the to-be-written files cached in the cache to obtain a first object file to be written
202
Writing the first object file into an object-based storage system to which a client has an access permission
203

FIG. 2

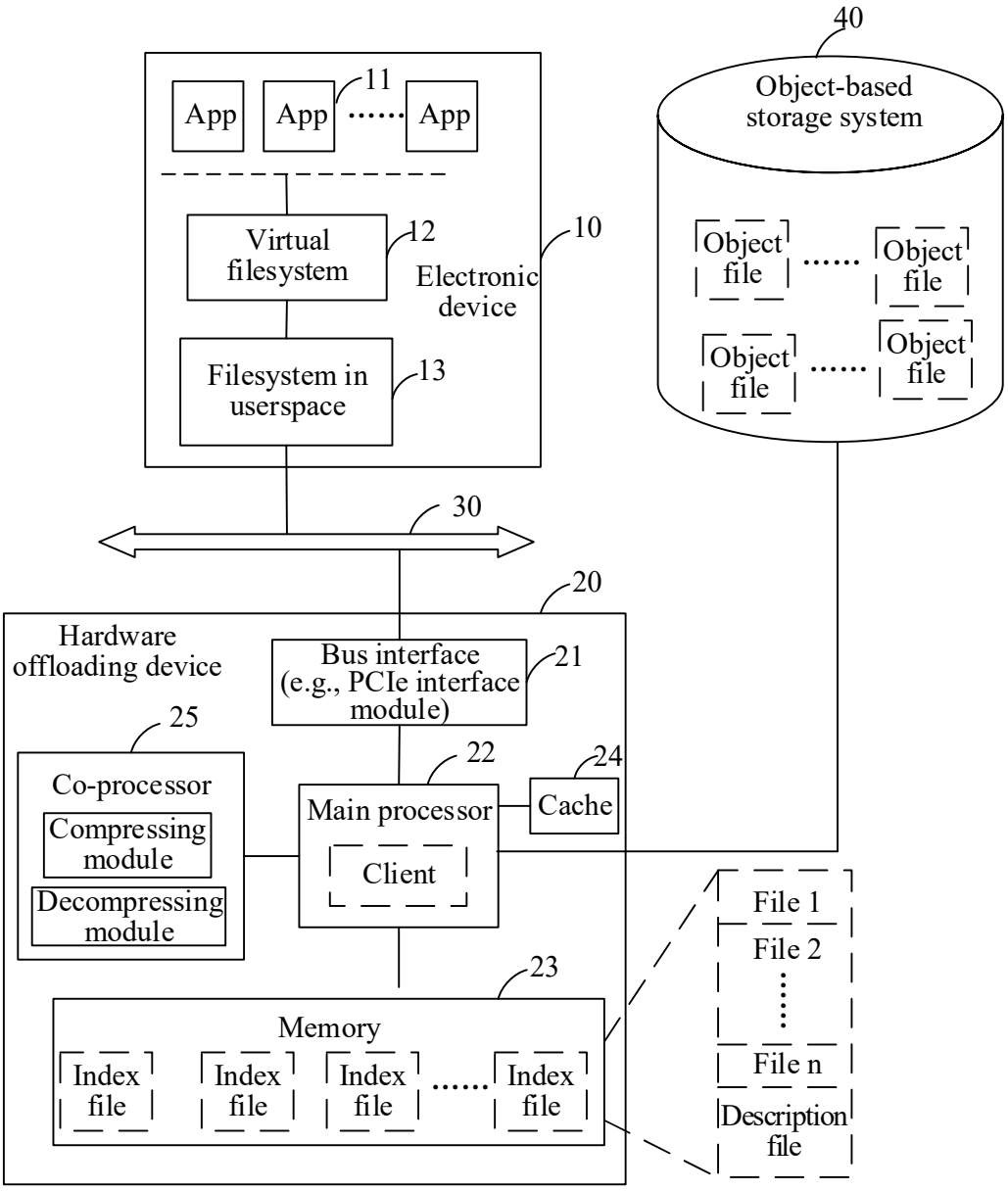

40
Object-based storage system
Object file
Object file
Object file
Object file
App
App
App
11
Virtual filesystem
12
Electronic device
10
Filesystem in userspace
13
30
20
Hardware offloading device
Bus interface (e.g., PCIe interface module)
21
25
Co-processor
Compressing module
Decompressing module
22
24
Main processor
Cache
Client
23
Memory
Index file
Index file
Index file
Index file
File 1
File 2
File n
Description file

FIG. 3

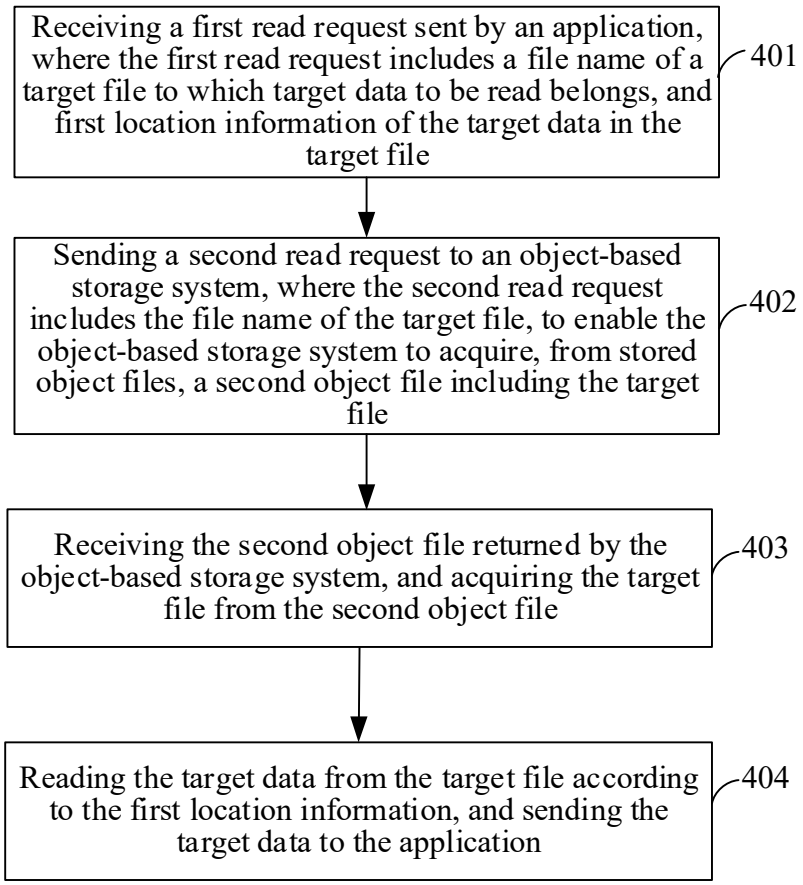

Receiving a first read request sent by an application, where the first read request includes a file name of a target file to which target data to be read belongs, and first location information of the target data in the target file
401
Sending a second read request to an object-based storage system, where the second read request includes the file name of the target file, to enable the object-based storage system to acquire, from stored object files, a second object file including the target file
402
Receiving the second object file returned by the object-based storage system, and acquiring the target file from the second object file
403
Reading the target data from the target file according to the first location information, and sending the target data to the application
404

FIG. 4

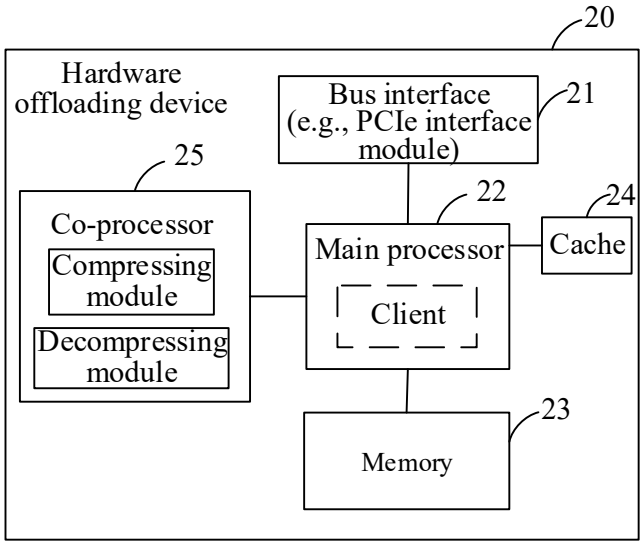

20
Hardware offloading device
Bus interface (e.g., PCIe interface module)
21
25
22
24
Co-processor
Compressing module
Decompressing module
Main processor
Client
Cache
23
Memory

FIG. 5

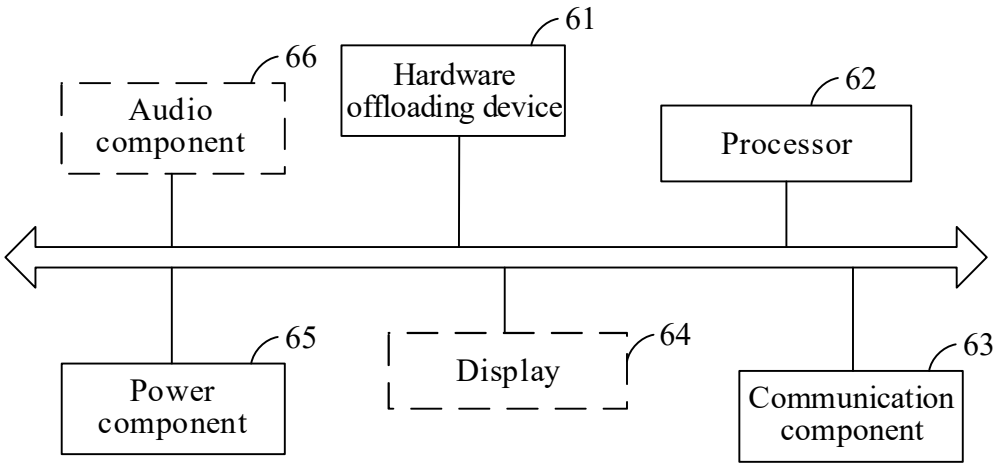

61
66
Audio component
Hardware offloading device
62
Processor
65
64
63
Power component
Display
Communication component

FIG. 6