

CLAIMS

1. An access method, comprising:

judging whether a first creation request for creating, in an operating system, a virtual file
5 system corresponding to a first storage device is received, the first storage device having an
application programming interface (API);

creating, in a preset path in the operating system, the virtual file system corresponding to the
first storage device by using a Filesystem in Userspace (FUSE) in the operating system when the
first creation request is received;

10 judging whether a first access request for the preset path is received;

sending the first access request to the virtual file system when the first access request for the
preset path is received, such that the virtual file system accesses the first storage device according
to the first access request, and without accessing the first storage device through the API.

2. The method of claim 1, further comprising:

15 judging whether a network file system corresponding to a second storage device is mounted
in the operating system;

acquiring a path that is in the operating system and for mounting the network file system
corresponding to the second storage device as a preset path when the network file system
corresponding to the second storage device is mounted in the operating system;

20 unmounting the network file system corresponding to the second storage device and
mounted in the operating system; and

performing the step of creating, in a preset path in the operating system, the virtual file
system corresponding to the first storage device by using a Filesystem in Userspace (FUSE) in
the operating system.

25 3. The method of claim 2, further comprising:

judging whether a mount request for mounting, in the preset path, the network file system

corresponding to the second storage device is received;

unmounting the virtual file system corresponding to the first storage device and created in the preset path, when the mount request is received;

5 mounting, in the preset path, the network file system corresponding to the second storage device;

judging whether a second access request for the preset path is received; and

sending the second access request to the network file system when the second access request for the preset path is received, such that the network file system accesses the second storage device according to the second access request.

10 4. The method of claim 1, further comprising:

judging whether a second creation request for creating a to-be-created folder in the first storage device through a sub-path of the preset path is received, the second creation request carrying an identifier of the to-be-created folder;

15 sending the second creation request to the virtual file system when the second creation request is received, such that the virtual file system creates the to-be-created folder in the first storage device according to the identifier of the to-be-created folder; and

establishing a correspondence relationship between the sub-path and the identifier of the to-be-created folder.

5. The method of claim 1, further comprising:

20 judging whether a deletion request for deleting a folder from the first storage device through a sub-path of the preset path is received;

acquiring a correspondence relationship between a preset sub-path and an identifier of a folder when the deletion request is received;

25 searching the correspondence relationship for the identifier of a folder corresponding to the sub-path;

sending the identifier of the folder corresponding to the sub-path to the virtual file system,

such that the virtual file system deletes the folder corresponding to the identifier of the folder from the first storage device; and

deleting the correspondence relationship between the sub-path and the identifier of the folder.

5 6. An access apparatus, comprising:

a first judging module configured to judge whether a first creation request for creating, in an operating system, a virtual file system corresponding to a first storage device is received, the first storage device having an application programming interface (API);

10 a creation module configured to create, in a preset path in the operating system, the virtual file system corresponding to the first storage device by using a Filesystem in Userspace (FUSE) in the operating system when the first creation request is received;

a second judging module configured to judge whether a first access request for the preset path is received; and

15 a first sending module configured to send the first access request to the virtual file system when the first access request for the preset path is received, such that the virtual file system accesses the first storage device according to the first access request, and without accessing the first storage device through the API.

7. The apparatus of claim 6, further comprising:

20 a third judging module configured to judge whether a network file system corresponding to a second storage device is mounted in the operating system;

a first acquisition module configured to acquire a path that is in the operating system and for mounting the network file system corresponding to the second storage device as a preset path when the network file system corresponding to the second storage device is mounted in the operating system; and

25 a first unmounting module configured to unmount the network file system corresponding to the second storage device and mounted in the operating system; wherein

the creation module is further configured to perform the step of creating, in a preset path in the operating system, the virtual file system corresponding to the first storage device by using the Filesystem in Userspace (FUSE) in the operating system.

8. The apparatus of claim 7, further comprising:

5 a fourth judging module configured to judge whether a mount request for mounting, in the preset path, the network file system corresponding to the second storage device is received;

a second unmounting module configured to unmount the virtual file system corresponding to the first storage device and created in the preset path, when the mount request is received;

10 a mounting module configured to mount, in the preset path, the network file system corresponding to the second storage device;

a fifth judging module configured to judge whether a second access request for the preset path is received; and

15 a second sending module configured to send the second access request to the network file system when the second access request for the preset path is received, such that the network file system accesses the second storage device according to the second access request.

9. The apparatus of claim 6, further comprising:

a sixth judging module configured to judge whether a second creation request for creating a to-be-created folder in the first storage device through a sub-path of the preset path is received, the second creation request carrying an identifier of the to-be-created folder;

20 a third sending module configured to send the second creation request to the virtual file system when the second creation request is received, such that the virtual file system creates the to-be-created folder in the first storage device according to the identifier of the to-be-created folder; and

25 an establishment module configured to establish a correspondence relationship between the sub-path and the identifier of the to-be-created folder.

10. The apparatus of claim 6, further comprising:

a seventh judging module configured to judge whether a deletion request for deleting a folder from the first storage device through a sub-path of the preset path is received;

a second acquisition module configured to acquire a correspondence relationship between a preset sub-path and an identifier of a folder when the deletion request is received;

5 a search module configured to search the correspondence relationship for the identifier of a folder corresponding to the sub-path;

a fourth sending module configured to send the identifier of the folder corresponding to the sub-path to the virtual file system, such that the virtual file system deletes the folder corresponding to the identifier of the folder from the first storage device; and

10 a deletion module configured to delete the correspondence relationship between the sub-path and the identifier of the folder.