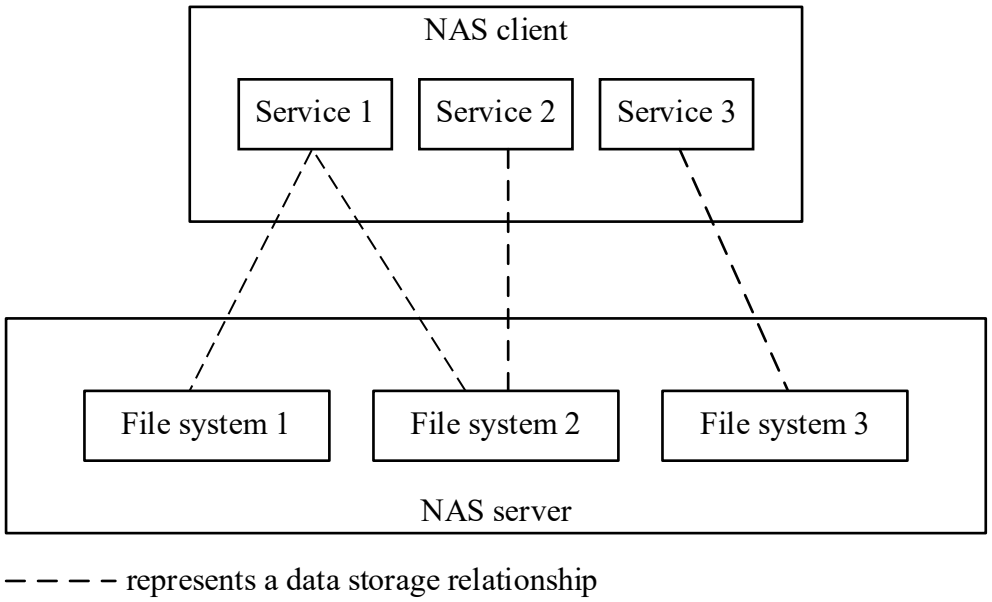
NAS client
Service 1
Service 2
Service 3
File system 1
File system 2
File system 3
NAS server
represents a data storage relationship

FIG. 1

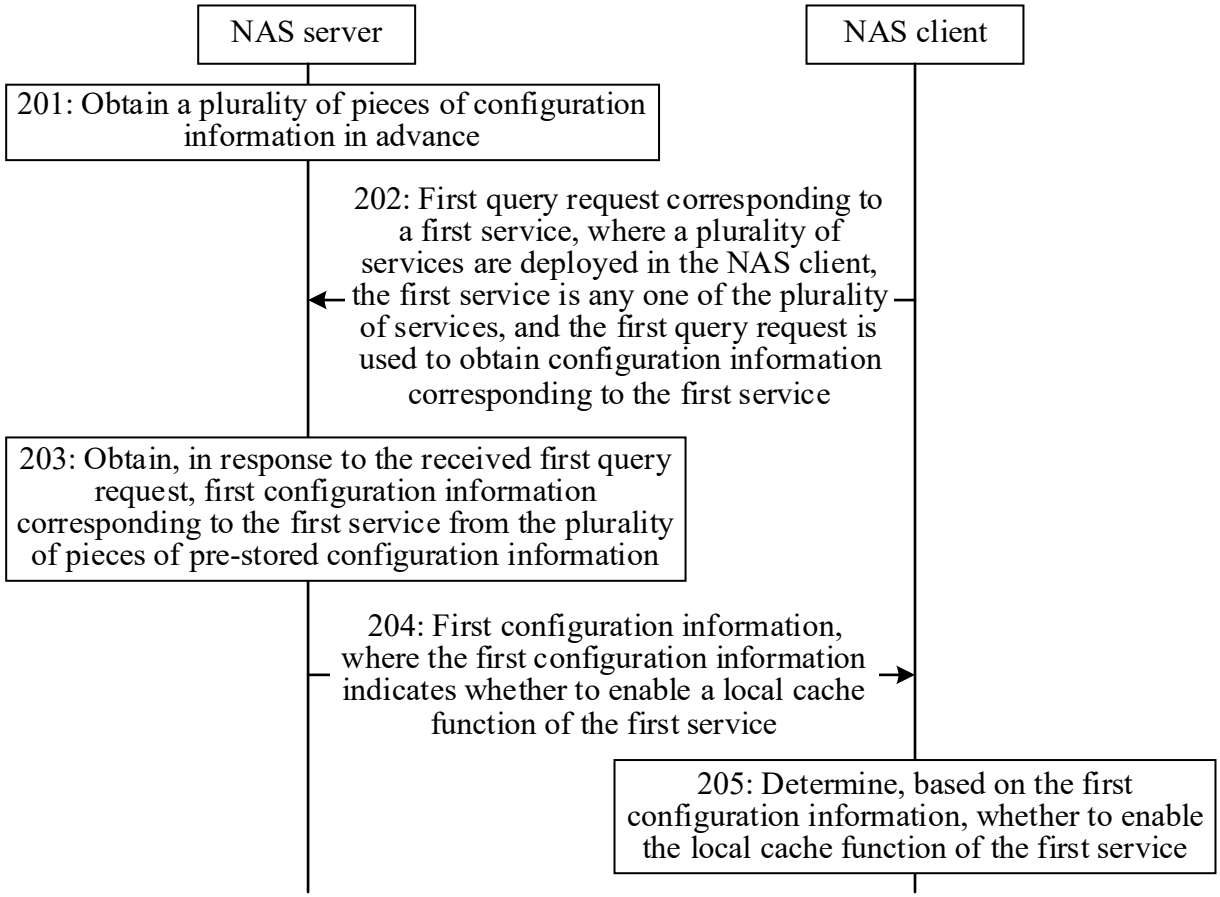
NAS server
NAS client
201: Obtain a plurality of pieces of configuration information in advance
202: First query request corresponding to a first service, where a plurality of services are deployed in the NAS client, the first service is any one of the plurality of services, and the first query request is used to obtain configuration information corresponding to the first service
203: Obtain, in response to the received first query request, first configuration information corresponding to the first service from the plurality of pieces of pre-stored configuration information
204: First configuration information, where the first configuration information indicates whether to enable a local cache function of the first service
205: Determine, based on the first configuration information, whether to enable the local cache function of the first service

FIG. 2

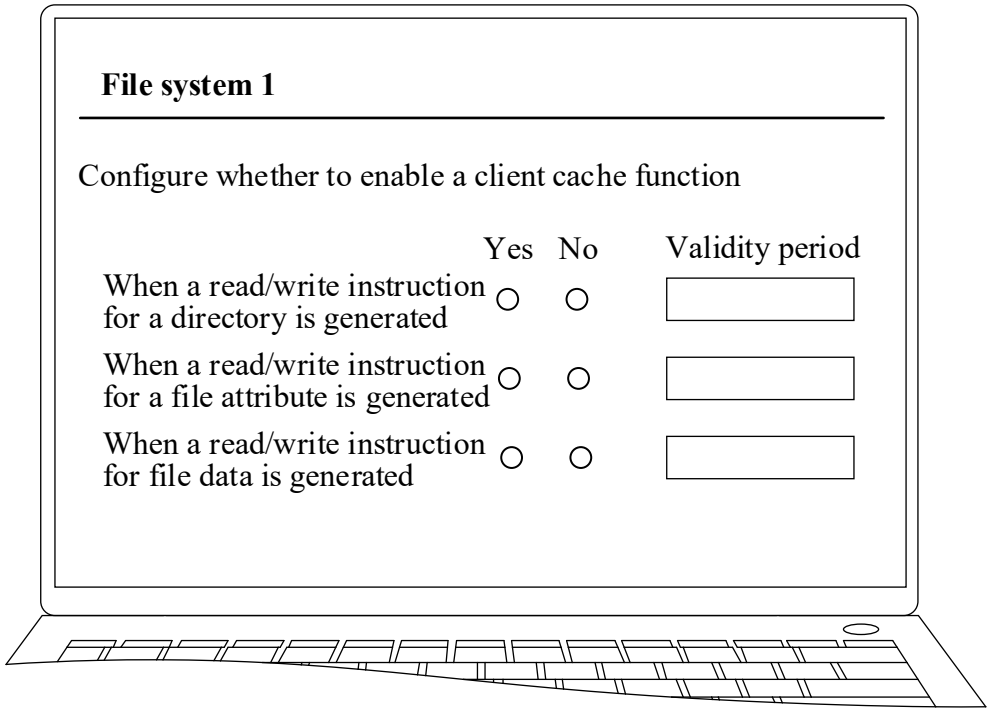
File system 1
Configure whether to enable a client cache function
Yes
No
Validity period
When a read/write instruction for a directory is generated
When a read/write instruction for a file attribute is generated
When a read/write instruction for file data is generated

FIG. 3

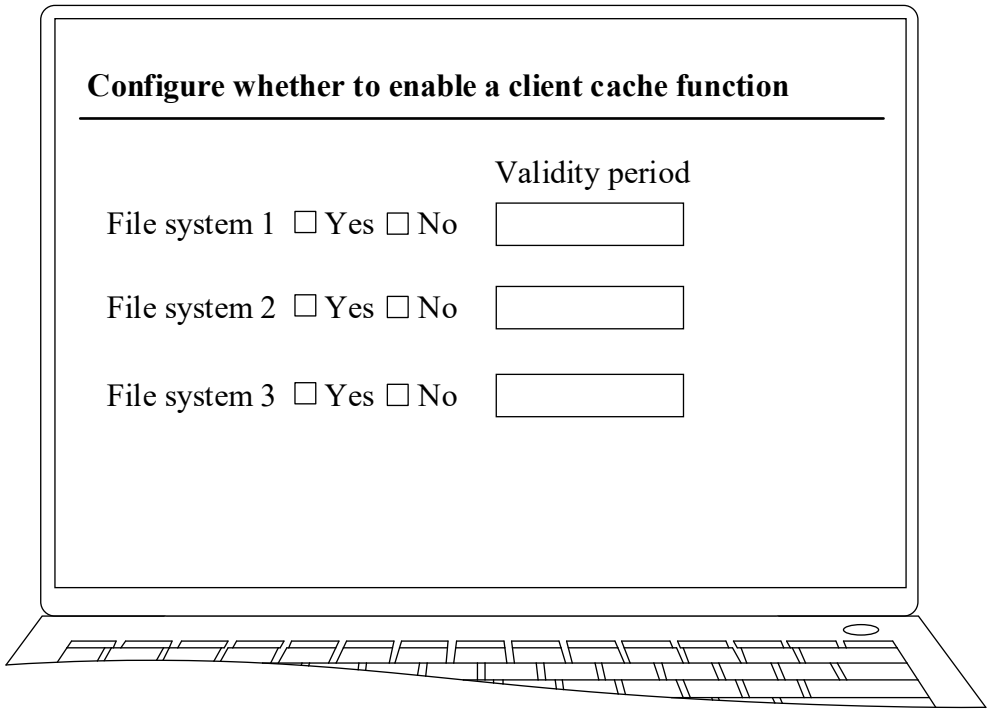
Configure whether to enable a client cache function
Validity period
File system 1 ☐ Yes ☐ No
File system 2 ☐ Yes ☐ No
File system 3 ☐ Yes ☐ No

FIG. 4

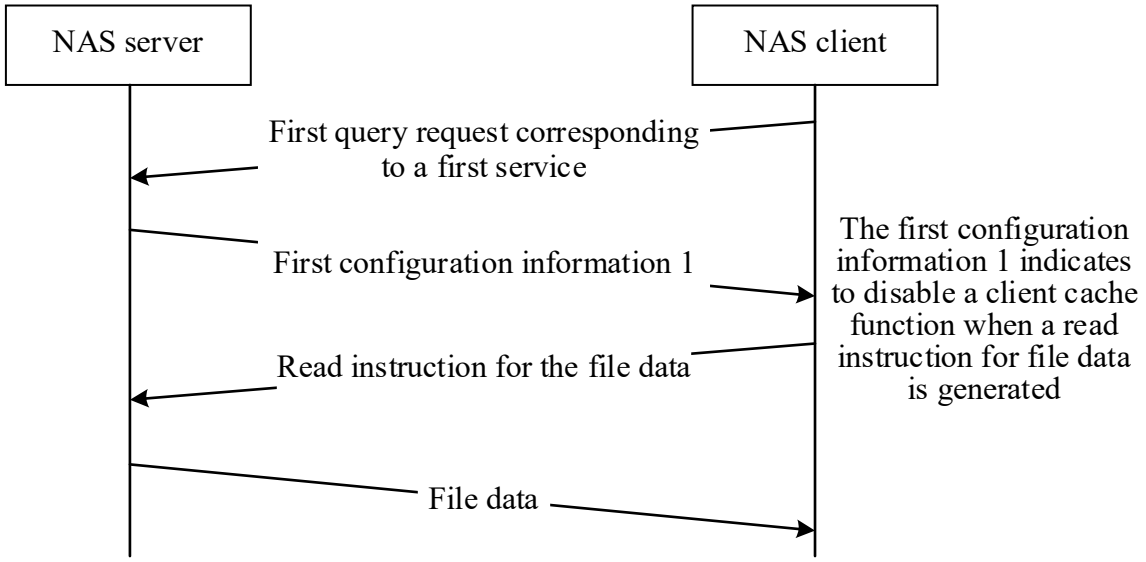
NAS server
NAS client
First query request corresponding to a first service
First configuration information 1
The first configuration information 1 indicates to disable a client cache function when a read instruction for file data is generated
Read instruction for the file data
File data

FIG. 5

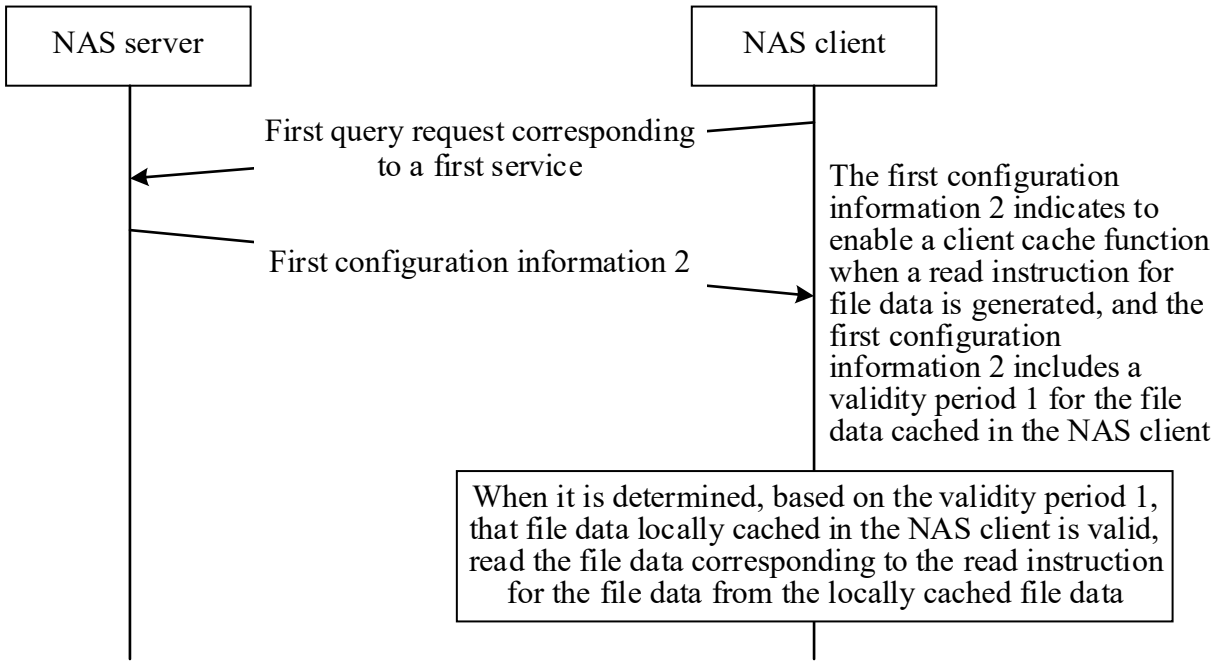
NAS server
NAS client
First query request corresponding to a first service
First configuration information 2
The first configuration information 2 indicates to enable a client cache function when a read instruction for file data is generated, and the first configuration information 2 includes a validity period 1 for the file data cached in the NAS client
When it is determined, based on the validity period 1, that file data locally cached in the NAS client is valid, read the file data corresponding to the read instruction for the file data from the locally cached file data

FIG. 6

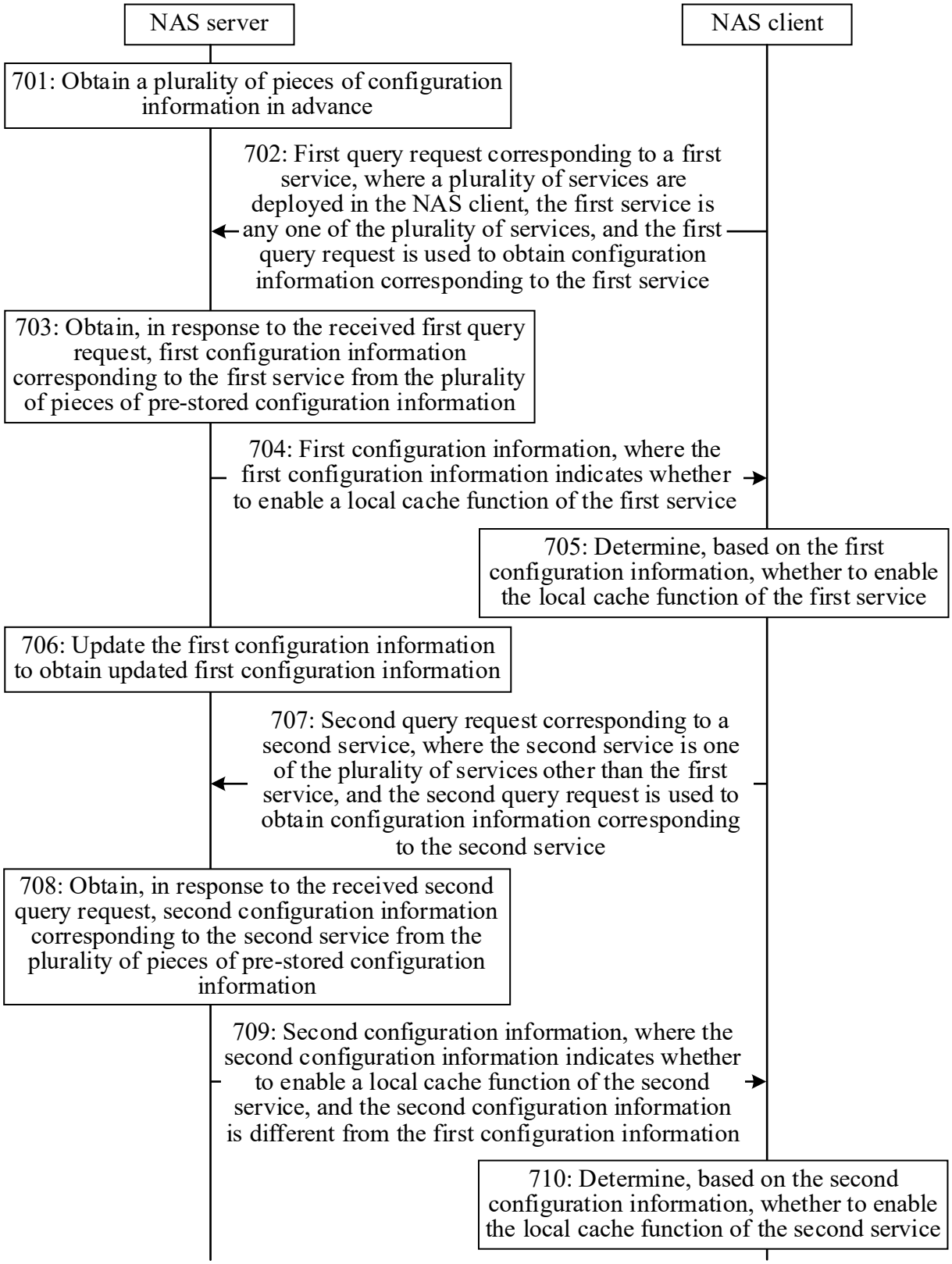
NAS server
NAS client
701: Obtain a plurality of pieces of configuration information in advance
702: First query request corresponding to a first service, where a plurality of services are deployed in the NAS client, the first service is any one of the plurality of services, and the first query request is used to obtain configuration information corresponding to the first service
703: Obtain, in response to the received first query request, first configuration information corresponding to the first service from the plurality of pieces of pre-stored configuration information
704: First configuration information, where the first configuration information indicates whether to enable a local cache function of the first service
705: Determine, based on the first configuration information, whether to enable the local cache function of the first service
706: Update the first configuration information to obtain updated first configuration information
707: Second query request corresponding to a second service, where the second service is one of the plurality of services other than the first service, and the second query request is used to obtain configuration information corresponding to the second service
708: Obtain, in response to the received second query request, second configuration information corresponding to the second service from the plurality of pieces of pre-stored configuration information
709: Second configuration information, where the second configuration information indicates whether to enable a local cache function of the second service, and the second configuration information is different from the first configuration information
710: Determine, based on the second configuration information, whether to enable the local cache function of the second service

FIG. 7

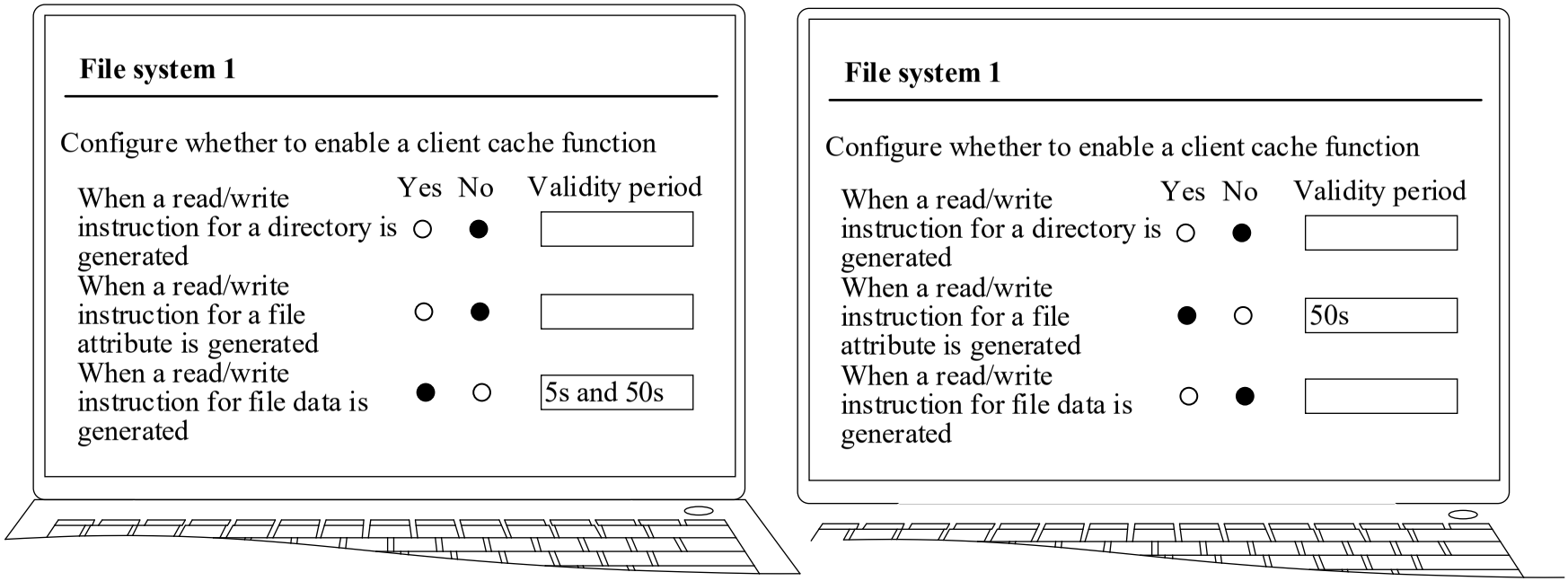
File system 1
Configure whether to enable a client cache function
Yes
No
Validity period
When a read/write instruction for a directory is generated
When a read/write instruction for a file attribute is generated
When a read/write instruction for file data is generated
5s and 50s
File system 1
Configure whether to enable a client cache function
Yes
No
Validity period
When a read/write instruction for a directory is generated
When a read/write instruction for a file attribute is generated
50s
When a read/write instruction for file data is generated

FIG. 8

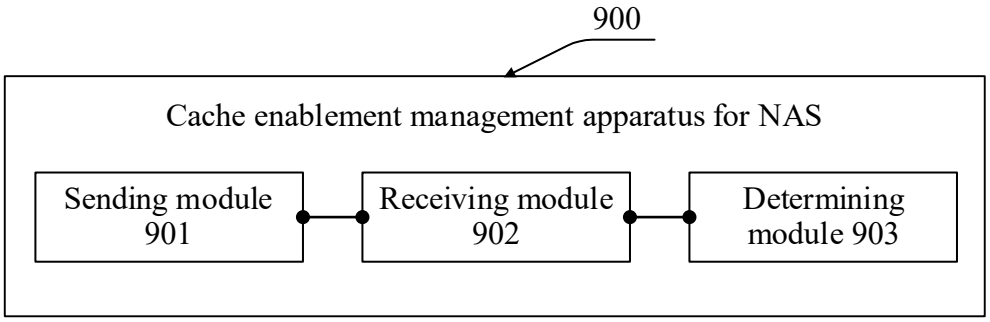
900
Cache enablement management apparatus for NAS
Sending module 901
Receiving module 902
Determining module 903

FIG. 9

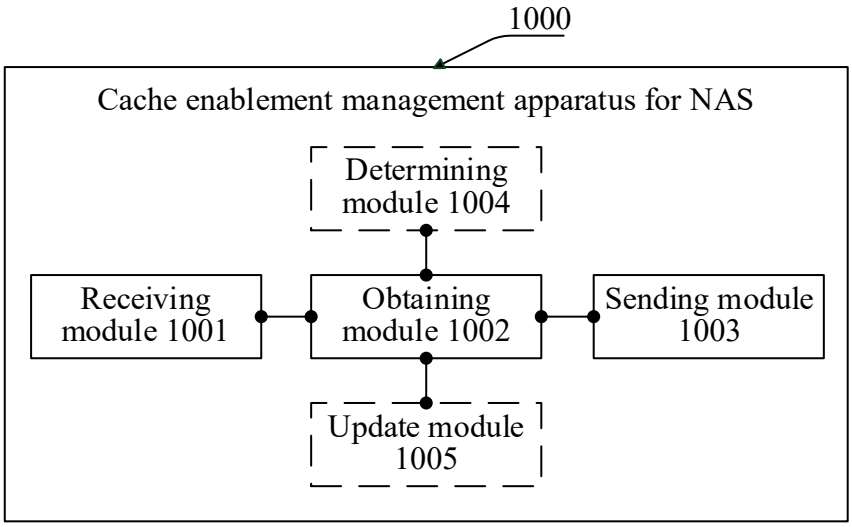
1000
Cache enablement management apparatus for NAS
Determining module 1004
Receiving module 1001
Obtaining module 1002
Sending module 1003
Update module 1005

FIG. 10

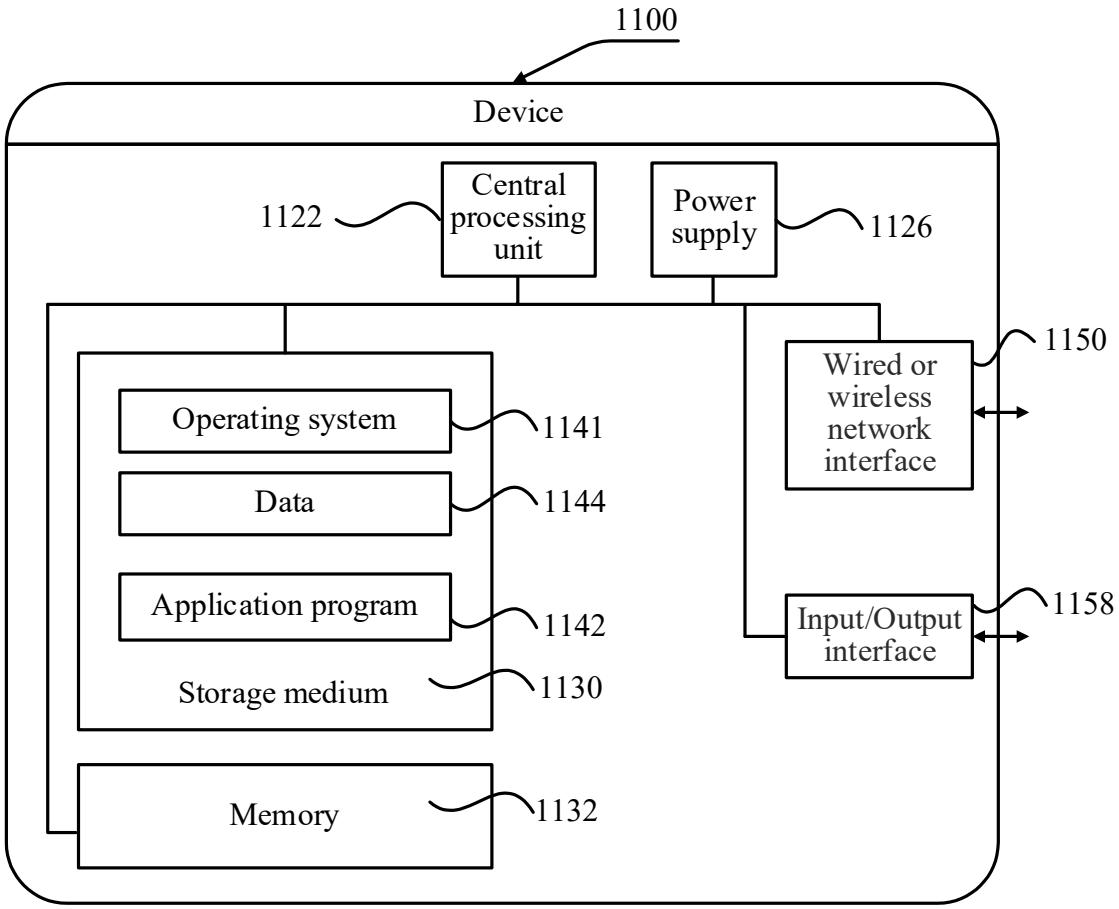
1100
Device
1122
Central processing unit
Power supply
1126
Operating system
1141
Data
1144
Application program
1142
Storage medium
1130
Memory
1132
Wired or wireless network interface
1150
Input/Output interface
1158

FIG. 11