

(19)



LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de l'Économie

(11)

N° de publication :

LU100458

(12)

BREVET D'INVENTION**B1**

(21)

N° de dépôt: LU100458

(51)

Int. Cl.:

H04L

(22)

Date de dépôt: 26/09/2017

(30)

Priorité:

13/09/2017 CN CN201710824186.6

(43)

Date de mise à disposition du public: 09/01/2018

(47)

Date de délivrance: 09/01/2018

(73)

Titulaire(s):

XIAMEN GUANGKAI ELECTRONIC TECHNOLOGY
LIMITED COMPANY – 361000 Xiamen City, Fujian
Province (Chine)

(72)

Inventeur(s):

GUO Xin – 361000 Xiamen City, Fujian
Province (Chine)

(74)

Mandataire(s):

DENNEMEYER & ASSOCIATES S.A. PATENT
DEPARTMENT – 1015 LUXEMBOURG (Luxembourg)

(54)

Cloud storage system based on cloud computing architecture.

(57)

The invention provides a network storage system, that is, cloud storage system based on cloud computing architecture. Cloud storage system based on cloud computing architecture consists of master server, storage server, monitoring server; It is characterized in that: the storage servers are connected in parallel; the storage server is connected with the user terminal through the network; the storage server connects to the primary server at the same time; the storage server connects the monitoring server through the monitoring nodes; the monitor server also connects to the primary server; and the main server is connected with the user terminal through the network. The invention has the advantages of high efficiency, safety and easy operation.

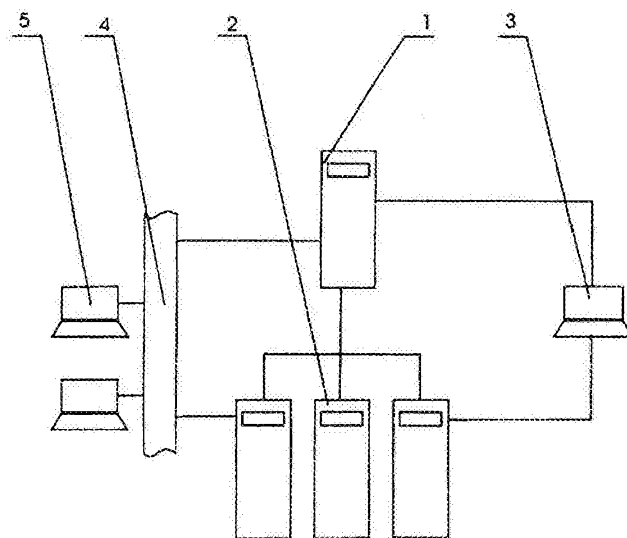


FIGURE 1

Cloud storage system based on cloud computing architecture

Technology

The invention relates to a network storage system, that is, cloud storage system based on cloud computing architecture.

Background technology

In existing network storage system, the upload and download efficiency of its user files is low, the system load is unbalanced and the security is poor, it is unsafe for users to upload files, and unable to synchronize off site documents. In particular, client software needs to be downloaded, and the operation is complicated.

Contents of invention

The invention aims at solving the technical problems above, and provides a cloud storage system based on the cloud computing architecture, with the aim of providing an efficient, safe and easy operation network storage system. The specific technical proposal of the invention is as follows:

Cloud storage system based on cloud computing architecture consists of master server, storage server, monitoring server; the storage servers are connected in parallel; the storage server is connected with the user terminal through the network; the storage server connects to the primary server at the same time; the storage server connects the monitoring server through the monitoring nodes; the monitor server also connects to the primary server; and the main server is connected with the user terminal through the network.

The cloud storage system architecture based on cloud computing can provide users with efficient storage and download services; By interacting with users, it provided users with the customization of various related storage services; it provides users with file synchronization and file backup services; and online editor for online storage and cloud document edition.

Users can synchronize files from personal computers to other remote hosts through the system. The server will guarantee the security of these files, and users can access these files through other hosts. In addition, the server will automatically synchronize a newly modified file of a machine to the host on the other end, while deleting the expired version based on the last modified time of user synchronization files; For the unmodified files, it will not operate, to avoid duplication of user synchronization files, so as to improve the efficiency of file synchronization, and save the user's time.

When users use the file synchronization function, the server will backup the user

synchronization files, and set up a detailed task log to record each operation; In addition, the server will realize the function of restoring a backup version when the user needs it. Users can use their own online editing tools by login; With this editor, users can create and edit the required documents (such as TXT, word, etc.), edit, save in private storage, or download locally; Files stored in the user's private storage will appear in the user's private storage space, and the user can edit them at any time.

The advantages of this invention: Parallel processing mechanism is adopted for uploading and downloading of user files; the whole process is stable and efficient; the background relies on a powerful cloud server cluster for distributed storage of files; the concept of cloud is introduced, and a perfect storage strategy is used to process the files stored in the storage nodes cluster; At the same time, the file segmentation and file backup are carried out, and the load balance of the cluster is realized, thus the security of the user uploading files is guaranteed; Cloud document editor provides online editing to achieve different synchronization documents, which is convenient and quick; Users use the system through the Internet rich application interface, without the need to download any client software, all operations are conducted in the cloud; it also increases monitoring nodes, and is equipped with cloud monitoring system, for real-time monitoring of the server details.

Brief description of drawings

Figure 1: The structure diagram provided by the embodiment of the invention;

Wherein: 1, Main server; 2, Storage server; 3, Monitoring server; 4, Internet; 5, User client.

Concrete implementation

Cloud storage system based on cloud computing architecture consists of master server, storage server, monitoring server; the storage servers are connected in parallel; the storage server is connected with the user terminal through the network; the storage server connects to the primary server at the same time; the storage server connects the monitoring server through the monitoring nodes; the monitor server also connects to the primary server; and the main server is connected with the user terminal through the network.

The cloud storage system architecture based on cloud computing can provide users with efficient storage and download services; By interacting with users, it provided users with the customization of various related storage services; it provides users with file synchronization and file backup services; and online editor for online storage and cloud document edition.

Users can synchronize files from personal computers to other remote hosts through the system. The server will guarantee the security of these files, and users can access these files through other

hosts. In addition, the server will automatically synchronize a newly modified file of a machine to the host on the other end, while deleting the expired version based on the last modified time of user synchronization files; For the unmodified files, it will not operate, to avoid duplication of user synchronization files, so as to improve the efficiency of file synchronization, and save the user's time.

When users use the file synchronization function, the server will backup the user synchronization files, and set up a detailed task log to record each operation; In addition, the server will realize the function of restoring a backup version when the user needs it. Users can use their own online editing tools by login; With this editor, users can create and edit the required documents (such as TXT, word, etc.), edit, save in private storage, or download locally; Files stored in the user's private storage will appear in the user's private storage space, and the user can edit them at any time.

Parallel processing mechanism is adopted for uploading and downloading of user files; the whole process is stable and efficient; the background relies on a powerful cloud server cluster for distributed storage of files; the concept of cloud is introduced, and a perfect storage strategy is used to process the files stored in the storage nodes cluster; At the same time, the file segmentation and file backup are carried out, and the load balance of the cluster is realized, thus the security of the user uploading files is guaranteed; Cloud document editor provides online editing to achieve different synchronization documents, which is convenient and quick; Users use the system through the Internet rich application interface, without the need to download any client software, all operations are conducted in the cloud; it also increases monitoring nodes, and is equipped with cloud monitoring system, for real-time monitoring of the server details.

The invention provides a user registration and user login interface, registered users can enter their own private storage space through the login screen to perform corresponding operations on personal files (such as upload, download, delete), unregistered users can apply to their own account through the registration interface, and then get the system permissions; After entering the private storage space, users can customize more storage space or unsubscribe redundant storage space according to their own needs; In the personal storage space, users can see the details of the existing files (including upload time, the latest update time, size, etc.), the personal space interface adopts imitation to Windows desktop operating system, which is convenient and easy to use. This simple and convenient storage service not only meets the needs of individual users, but also brings convenience to small enterprise users. File synchronization: users can synchronize files from personal computers to other remote hosts through the system. The server will guarantee the security of these files, and users can access these files through other hosts. In addition, the server can

automatically synchronize a machine's newly modified files to the host on the other end of the user's synchronization file at the last modification time, while deleting the expired version; for the unmodified file, it will not operate, so as to avoid duplication of user synchronization files, improve the efficiency of file synchronization, and save the user's time. File backup: when users use the file synchronization feature, the server will backup the user synchronization files, and set up a detailed task log to record each operation; moreover, the server side will be able to restore the functionality of a certain backup version when the user needs it.

Patentansprüche

1. Ein auf der Cloud-Computing-Architektur basierendes Cloud-Storage-System besteht aus einem Masterserver, einem Speicherserver und einem Überwachungsserver. Es ist dadurch gekennzeichnet, dass: die Speicherserver parallel geschaltet sind; der Speicherserver über das Netz mit dem Benutzerendgerät verbunden ist; der Speicherserver verbindet sich gleichzeitig mit dem primären Server; der Speicherserver verbindet den Überwachungsserver über die Überwachungsknoten; der Überwachungsserver verbindet sich auch mit dem primären Server und der Hauptserver ist über das Netz mit dem Benutzerendgerät verbunden.

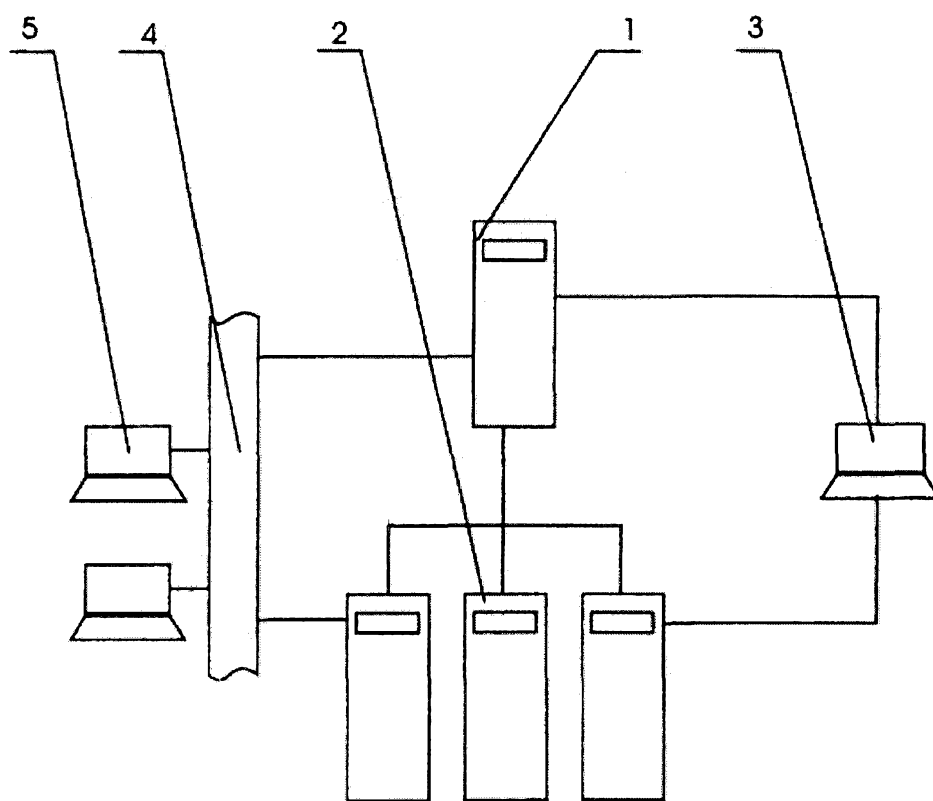


FIGURE 1

Abstract

The invention provides a network storage system, that is, cloud storage system based on cloud computing architecture. Cloud storage system based on cloud computing architecture consists of master server, storage server, monitoring server; It is characterized in that: the storage servers are connected in parallel; the storage server is connected with the user terminal through the network; the storage server connects to the primary server at the same time; the storage server connects the monitoring server through the monitoring nodes; the monitor server also connects to the primary server; and the main server is connected with the user terminal through the network. The invention has the advantages of high efficiency, safety and easy operation.