Research on the Information Construction of Accounting Audit Based on the Big Data of Computer

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ABSTRACT

For distributed network content audit system, its communication needs have two important aspects. One is how to let the audit rules sent fast to the entire network, the other is the Internet records data transmission of audit nodes among each other. The above two issues are related to the broadcasting of network news and the large-scale data transmission. This article mainly carries on the thorough research on large-scale data transmission and proposes the approach of large-scale data transmission, and puts forward its application method in the distributed network content audit system. For the large-scale data transmission, the main idea to realize it is by dividing the large-scale data into blocks and combining with various transmission routes to transmit. In this paper, the main methods of the current large-scale data transmission are analyzed and the shortcomings are summarized. Based on the algorithm of task allocation in the reference of grid computing, the large-scale data transmission algorithm is put forward based on node performance. This transmission algorithm uses APDG broadcasting algorithm to find relay nodes, and by judging the performance of the relay nodes, segments different size data blocks to the relay nodes for forwarding. The experimental results show that the large-scale data transmission algorithm based on node performance, compared with the current large-scale data transmission algorithm, has better flexibility and transmission performance.

KEYWORDS

APDG Broadcasting Algorithm, Distributed Network Content Audit System, Large-Scale Data Transmission, Node Performance

1. INTRODUCTION

At present, with the development of mass storage and broadband transmission technology, the centralized network content audit system has been unable to bear the content audit assignment under the circumstance of high speed and distributed environment (Scott et al., 2016). Especially in recent years, with the rapid development of the forum and microblogging platform, due to the rapid transmission of information and large influence scope, the traditional centralized network content monitoring becomes unable to control the reactionary and false statements in such information (Dugan et al., 2015). In this case, the dynamic and distributed network content audit system has become an important research topic of the network content audit system (Contreras-Castillo, Zeadally, & Ibáñez, 2016). Network content audit system is a technology that is produced with the development of Internet. From the use of technology, it intercepts with network data packets of the firewall and IDS (Intrusion Detection System) and then analyzes and filters from the point of view of safety (Vasarehelyi, Kogan, & Tuttle, 2015). But compared to the firewall or intrusion detection, network content audit pays more attention to the network data packet content analysis and mining. From the application, the network

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content audit system is mainly used in government, institutions, and enterprises and its main function is to carry out the network content detection and information security (Shah, 2015). In a variety of network applications, network nodes often need to carry out data transmission. If the scope of the data needed to transmit is huge, at this time a large-scale data transmission algorithm is needed. In different application environment, the large file transfer has different solutions (Bottou, 2015). At present, the two main areas of the research on the large-scale data transmission are network computing and P2P network. In this paper, in allusion to the lack of centralized network content audit system, design distributed network content audit system model. For communication technology in a distributed network content audit system, this paper focuses on detailed study on large-scale data transmission.

2. LARGE-SCALE DATA TRANSMISSION ALGORITHM

For large data transmission, data block and multi-paths transmission are the important method to improve its efficiency (Riggins & Wamba, 2015). In the process of transmission, multiple relay nodes form a number of transmission paths. This article firstly analyzes the existing large-scale data transmission algorithm, and then points out the shortcomings of the current main large-scale data transmission algorithm. On the basis of the existing large-scale data transmission algorithm, combining the algorithm about task scheduling and allocation in the grid, this paper proposes the large-scale data transmission algorithm based on node performance blocks, and then does analysis and simulation experiment of the algorithm.

2.1. Processing Method of Large-Scale Data Transmission

In large data transmission, the basic way is to make a segmentation of the large-scale data. Different data blocks transmit through different paths with multi-paths transmission. In the selection of multi-paths, it is necessary to find rely nodes according to network state, and transmit the data blocks through the relay node. Therefore, there are a lot of literature studying on the relay node or the selection of transmission links. In addition, there are also some literature doing deep research on how to choose form the different transmission paths under the condition of the data block on the occasion of getting some transmission paths. In consequence, this part is mainly divided into two parts. One is the algorithm of transmission link selection, the other is the selecting algorithm of the data block the algorithm of different transmission links. These two aspects are the two main parts of the processing of large-scale data transmission.

2.1.1. Transmission Link Selection

In the link state routing algorithm, the link is selected through the judgement of real-time status of the current link to get more free link and forward the large-scale data through a free link. For example, before the transmission of a large-scale data, the network link state is shown in Figure 1. According to the common path, the selection algorithm is the shortest path algorithm or the deformation, and for a source node S and a destination node D, the optimal transmission path is S->1->2->D, at this time the path cost is 7; the sub optimal path is S->3->4->N, the path cost is 9.

In the multi-path selection based on Figure 2, if the algorithm transmits large-scale data through two paths, the nodes 1, 2, 3, 4 are the relay node. Then we see that each path is forwarded to achieve large-scale data transmission through two relay nodes. The more relay transmission paths are in each node, the worse the path stability will be. There is another problem existing in the above link selection that the two transmission paths in the time physical link may use the same physical link, as shown
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