Research on Application of Network System Software Based on Large Data Analysis

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Abstract: With the continuous progress of science and technology and the rapid development of Internet technology in China after the reform and opening up, intelligent devices have entered people's lives in an all-round way. This paper explores the network system software under the big data environment, discusses the concept of big data and its application value, and constructs the network monitoring system of big data analysis and communication, so as to make people better understand the importance of customer perception communication system under the big data environment.

1. Introduction

The traditional communication system and monitoring system has been unable to meet the needs of customers for communication network under the background of big data in the information technology times. Traditional communication device and monitoring system mainly uses alarm to warn when the equipment is out of work, and then to examine and repair it by staff, which fails to reflect the current situation of network communication. Equipment problems can be found in time and adopt solutions by using customer perception as the central monitoring system. Under the big data environment, it is the only way for the development of communication network to establish a complete communication network monitoring system and improve the communication network technology.

2. Overview of Big Data and Its Application Value

2.1 Concept Analysis of Big Data

The big data refers to collect a large amount of information and import it into a huge database, analyze and process the collected information. Big data is the most representative term in IT industry nowadays, it has four main characteristics: fast download speed, high authenticity, huge amount of data and various types. Corresponding science and technologies with commercial value emerge as the times require in the big data environment, such as data analysis, data mining, data security, data database and so on. Big data technology is widely used not only in computer industry, but also in communication, medical, energy and other industries. Big data meets the needs of various departments of enterprises and provides them with a large amount of data and information needed. Enterprises can also trade data to improve the economic efficiency of enterprises and promote the growth of national GDP.

2.2 Application Value of Big Data

Big data can be widely used in various walks of life with certain commercial value. It can not only collect information, but also analyze and process information, which has great use value. In the information age, big data is not only a special technology for individuals and fields, but also widely applied to everyone and all fields. A good data information system is the power source for the operation of enterprise departments because data analysis can help enterprises reduce costs and improve economic benefits by using data transactions. Analyzing information data by using big data

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technology can provide favorable data for future decision-making of enterprises. The content of the data is processed, deeply excavated and carefully analyzed by using quantitative method. According to the situation reflected by the data, the enterprise can judge the future decision-making, so as to grasp the future development direction of the enterprise. The application of big data technology brings convenience to enterprises and promotes their economic development.

2.3 Optimizing Communication Network through Big Data Analysis

Network communication optimization system guarantee the organization and operation of communication network monitoring system. In the big data environment, optimizing the communication network through big data analysis is an effective way to ensure the smooth operation of the communication network monitoring system.

The core content of communication network optimization is data under the large data environment. Communication equipment, terminals, networks, users and so on will produce a large amount of information data in the process of communication network operation. These information data can objectively reflect the operation of communication network, which has great significance to data analysis and data interpretation. Optimizing communication network and evaluating the quality of information network construction can improve the quality of communication management and help the construction and use of communication network monitoring system through using the big data analysis.

3. Constructing the Software of Big Data Analysis Network System

3.1 Network Monitoring System Based on Alarm

There are many types of network monitoring system. The monitoring system take alarm as the main measure needs the monitoring department to consider the matter in order of priority according to the actual situation, so as to take corresponding remedial measures. This way of handling directly affects the satisfaction of customers and whether the enterprise makes full use of human resources. In the big data environment, the network monitoring system carries out the equipment fault alarm processing, and then issues the work order to the relevant departments mainly through collecting the equipment. This network monitoring communication system also has some shortcomings, because the alarm is come from the equipment and the monitoring system and staff are in a passive state, which makes the alarmed customer perception system suffer seriously damage, thus relying on the professional network management acquisition interface too much, resulting in the overload of the integrated alarm system. When the port alarm occurring on different devices or nodes, the service will be blocked, the speed of users using the network will decrease, and the stability of the network will be seriously destroyed.

However, this situation has no effect on user perception, which makes the network monitoring system unable to get fault information. The alarm-centered network monitoring system can not effectively perceive the changes of network operation quality, achieve the purpose of prevention, support network optimization, and detect the decline of network quality in time. Only when the alarm occurs, can we deal with it. Therefore, the communication network monitoring system based on alarm can not obtain customer perception.

3.2 Network Monitoring System Based on Customer Perception

The network system software mainly focuses on customer perception. The working procedure of this kind of monitoring system mainly includes the following aspects:

(1) A large amount of data information is collected, sorted and stored in the database, and the system is analyzed and processed to form a view of regional network service quality in the large data environment.

(2) The view of regional network service quality shows the network service level,the changes of network service quality in a specified time according to different colors, and explores the reasons for the changes. So as to put forward the suggestions of the network system software on network

optimization, development and maintenance, then production orders are sent to the corresponding departments to deal with the faults.

(3) Network system software can improve customer perception, and contrast processing of regional network service quality according to the specified indicators, so as to maintain the network and improve the overall network operation quality [5].

Network system software can collect information through different channels based on customer perception. At the customer's equipment terminal, install relevant software to record the customer's location, test the network signal situation of the customer's area through wireless network, download the measured data rate, and transmit the data information to the perception platform by data channel or short message. Due to broadband users can install information recording software on client terminals or computers to record data such as customer location, packet loss rate, and download speed. Then the data information can be transmitted to the perception platform through the corresponding data information transmission mode. The main function of perception terminal is to simulate customers, that is collect customer perception and test the integrated wireless and other functions [6].

In the information age, the network monitoring system which focus on customer perception can effectively collect a large amount of data and information. The results of analysis and processing are credible. The information data of the same client and different nodes can be compared vertically and horizontally, so as to reflect the situation more authentically. The collection of information is a practical acquisition with high practicability. Then the intensity of network signal can be evaluated through special operations and the changes of data before and after, so as to optimize the whole network system. There is no limitation in the wide range of information collection, so the results of information data are more accurate.

4. Conclusion

With the rapid development of science and technology in nowadays, network technology continues to progress and intelligent devices are gradually popularized. The ability of network information monitoring system to collect, organize and analyze data is also growing. Taking customer perception as the central basis and collecting information through different channels to make up for the defects of network monitoring system centered on alarm.

The information monitoring system based on customer perception can quickly find out the faults and inspect the causes, so as to dispatch orders for overhaul. This method improves the quality of customer network, saves capital for enterprises and promotes the rapid development of communication industry.

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