

Analysis of Cyber Security Threat Environment and Information Security System of Financial Industry Under New Situation

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ABSTRACT

With the rise of Internet finance model, the deterioration of external security environment and the increasing complexity of its own system architecture, the banking industry is facing increasingly severe network security threats. This paper analyses the network security problems of “Clientz Enterprise” financial institutions, and puts forward some constructive ideas to strengthen the network security management of banking financial institutions based on the working mechanism of the Internet company's security emergency centre.

Keywords: Security, and information, cyber security, situations, threats

INTRODUCTION

Clientz enterprise is a business with three business units: private banking, corporate and retail banking, insurance and investment banking. The company was a pioneer in bringing integrated online digital fintech banking to southeast Asian markets. However, as competitors start to catch up, customers want to revolutionise the way these services are provided. The enterprise is designed to reorganize and adapt existing application architectures and develop applications on a multi-channel infrastructure that will satisfy multiple channels, including the Internet. Therefore, cyber security is critical to its business.

With the increasingly urgent demand for financial electronic services and the rapid development of information technology, traditional financial services and emerging Internet technologies are experiencing close integration, which promotes the innovation of financial models and service channel transformation, but also brings severe network security threats and challenges. To re-examine the defects in the financial industry information system and security management system, optimize or even reconstruct the existing information security technology architecture, and implement the upgrade and transformation of security management and strategy will become an important part of the construction of an independent and controllable information security system in the financial industry.

METHODOLOGY

Traditional security software and hardware products such as anti-virus software, intrusion detection, Web firewall, etc., mainly solve single-point security problems, and most of them are based on feature code and rule base detection methods, which lack network global security situation awareness ability and behavior-based intelligent analysis means, unable to deal with new high-level threats. Intelligent security based on big data technology will be the direction of bank security technology transformation. Gartner (2014), a famous information technology consulting company, predicted that 25% of international large companies would apply big data technology to at least one security or anomaly detection in 2016. The intelligent security technology of big data mainly includes two parts: first, the perceptual collection of security data. The main task is to collect, filter, store and format the heterogeneous security data from different sources. For the banking system, the data source should not only contain the traffic data of network equipment and the service log of the application system, but also all kinds of operation logs of the business system, providing the basis for the subsequent security analysis and forensics. The second is the correlation analysis of security data. On the basis of big data storage, security protection has the conditions of long period detection and heterogeneous association analysis of different sources. The development of technologies such as Hadoop and Spark is the efficient parallel computing of massive data, which is the security modeling capability of the technical team based on big data.

FINDINGS & DISCUSSION

Through the above case study, I learned that Clientz enterprises are facing many challenges in traditional banking and finance with the rise of the new Internet financial model. And big data technology development and wide application, is undoubtedly provides a valuable "gold mine", using big data technology, will be dispersed in the financial service network with the massive amounts of information in the IT system and the external data sources integration based on business drivers, and combined with the characteristics of the financial sector, financial business as the core, improving customer experience and customer value, optimizing operation process, forecast the marketing effect, improve management level.

RECOMMENDATION

People are the owners, managers and users of information systems. According to statistics, only 20% ~ 30% of information security incidents are caused by pure hacking or other external reasons, and the other 70% ~ 80% are caused by internal employees' negligence or intentional leakage. Therefore, I think Clientz Enterprise should put people management as the core of security management when implementing information security management system. The first is to carry out fine-grained system authority division, according to the internal personnel development, maintenance, management responsibilities and levels of different authority allocation, standardize the operation process, to avoid the modification of delete from the operation log and other situations. Second, in the outsourcing project, the operation monitoring of the third party personnel should be strengthened. For the core data reading and computing scenarios, data homomorphic encryption and decryption, data desensitization and other mechanisms should be added. The third is to strengthen the daily operation and maintenance, emergency response, security experts and other special groups of functional positioning and capacity building, to build a three-dimensional information security management team. Fourth, carry out information security training and drills regularly to improve security awareness and skills of all staff.

The technical level needs to be improved. Compared with Internet companies with professional advantages, Banks may have obvious shortcomings in carrying out Internet finance, since these are two different fields. The specific performance is as follows: 1. Insufficient product development ability; Banks' understanding of the Internet and corresponding technology development level need to be improved; 2. The establishment of Internet platform technology architecture and data mining technology of big data pose a great

challenge to Banks; 3. Data security technology. If a platform has a vulnerability but is unable to fill the data tampered with, it will bring great risks to the banking industry.

CONCLUSION

The application of big data in the financial field is far more than that. With the continuous optimization of big data tools and platforms, and the popularization of machine learning and other analysis technologies, the role of big data in every link of financial activities will also continue to deepen. In the face of big data application topic selection, financial enterprises should also pay more attention to the promotion of big data to the all-round business operation ability of various fields of financial business development. We believe that the financial industry will continue to deepen reform and make steady innovation driven by big data

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