Risk management of E-commerce security in cloud computing Environment

Abstract-

The emergence of cloud computing technology has changed the traditional business economic model and provided convenience for the application of E-commerce in the financial field. This paper using cloud computing as the entry point to analyze the security of E-commerce in a cloud computing environment in detail.it also proposes relevant solutions to how e-commerce can ensure the security of its own data in the context of cloud computing.at the same time, it also pays attention to reducing the user’s trust, satisfaction and loyalty to the information system.

Introduction:

The emergence of cloud computing technology is considered to be a new generation of technological revolution, which as a great impact on the business modal and business processes of enterprises. with cloud computing, enterprises can obtain fast, efficient, secure and reliable cloud services at a lower cost, which allows enterprices to have great flexibility and powerful data processing capabilities. However, compared with the traditional internet environment, the information security risks in the cloud computing environment are more complicated, and many security risks are emerged. When a customer uses cloud computing, he cannot know exactly where his data is stored or even in which country. The form of data stored in cloud computing is usually all customer data sharing methods, and there is a risk of isolation between customer data. when catastrophic events occur, customer data and services will be more difficult to protect and recover. Because there are fewer methods for quantifying information security risks in the cloud environment, a cloud risk analysis and quantification method is proposed on fault tree and Monte Carlo simulation for the cloud computing environment. For a certain risk in the cloud environment, a fault tree is used to build the relationship between risk and risk factors. the assignment of risk factors uses a probability distribution function shows the probability of exceeding a given risk cost. The advantage of this method is that instead of assuming a specific value for the risk factors, it assumes a certain probability distribution. Through the montecarlo analysis, the ranking of the risk factors can be known to better control the risk.

Existing work:

The security risks associated with each cloud delivery model vary and are dependent on a wide range of factors including the sensitivity of information assets, cloud architectures and security controls involved in a particular cloud environment. Over time, organizations tend to relax their security posture. To combat a relaxation of security, the cloud provider should perform regular security assessments. Risk management framework is one of security assessment tool to reduction of threats and vulnerabilities and mitigates security risks. The goal of this paper is to present information risk management framework for better understanding critical areas of focus in cloud computing environment, to identifying a threat and identifying vulnerability. This framework is covering all of cloud service models and cloud deployment models. Cloud provider can be applied this framework to organizations to do risk mitigation.

Disadvantage:

The system’s DAA (Designated Approving Authority) must determine whether corrective actions are still required of decide to accept the risk.

Proposed work:

This proposed work uses cloud computing as the entry point to analyze the security of e-commerce in the financial field. This paper uses cloud computing as the entry point to analyze the security of e-commerce in cloud computing environment in detail. It also proposes relevant solutions to how e-commerce can ensure the security of its own data in context of cloud computing.

Advantage:

At the same time, it also pays attention to reducing the user’s perception of information security risks from the users perspective, and improving the user’s trust, satisfaction and loyalty to the information system.

**Conclusion:**

In the cloud computing environment the user’s perception of information security risk is also changing and deepening gradually, and the user’s perception of information security risk has become an important factor in the users willingness to use the information system. The research of this paper emphasizes that enterprises should combined information security risk analysis with information security awareness when carrying out information security risk management and study the model of information security risk assessment and risk decision making. In view of mutual impact of information security risk factors, the paper puts forward the information security risk assessment model based on network analysis method which is not only beneficial to enterprises to grasp the size of internal information security risk, and reduce the loss of enterprise information security risk.