Chapter 15
Practical Approach for Data Breach Cases in ERP Systems

Pedro Sousa
Higher Polytechnic Institute of Gaya, Portugal

José Costa
Higher Polytechnic Institute of Gaya, Portugal

Vitor Manso
Higher Polytechnic Institute of Gaya, Portugal

ABSTRACT
This chapter is based on a case study scenario where a major data breach happens in one institution of public sector, a municipality, in Portugal. The focus of this chapter is to explain the gap between software development and security specialists because these are two fields of information and technology with specialized staff, but they do not work together. Quality Software may increase if these two fields work together and all specialists work for a good end product. At the other extreme are organizations with security problems because the software is bad in the security field, and these organizations do not have mechanisms that help internal teams in case of security incidents. If security is not a concern when companies are developing software, the security specialists have a lot of problems when trying to audit the system.

INTRODUCTION
From the point of view of the organization’s management, computer security is seen as an irrelevant factor in the business concerns. This area is usually a concern for the departments of information and communication technologies. This minimizes the factor and the scope of computer security being reviewed at the local level of the department and not as a general concern. This idea is not true, generating a false sense of security for the organization. This feeling lasts while the organization is not compromised.

DOI: 10.4018/978-1-4666-4526-4.ch015
Practical Approach for Data Breach Cases in ERP Systems

From the start, that business management platform, known as Enterprise Resource Planning (ERP), is the privileged place for the storage of important information. These are careless in terms of computer security, and investments/Measures in security are targeted to the equipment and services of perimeter systems, such as firewalls, intrusion detection systems, proxies and security devices. There is a gap between the development and implementation of ERP and computer security efforts made by organizations, the investment area focused in other areas forgetting ERP systems. On the other hand, software development companies have little focus on the issue of computer security and the development of systems is careless in these themes.

In a society where all are connected to the network and the Internet, information systems security or computer security is not a major concern for organizations in general, in Portugal. This reality has changed in the last few years, but organizations are not fully alerted to this problem and IT (Information and Technology) Departments need a cultural change and the mindset needs to change.

Security problems in the public sector need to be a major concern, because public institutions have information from citizens and are financed by taxing money, the money of every contributor. The reality is very different, normally security issues are the last concern for IT Departments in the public sector, and in this paper we have a case study about a real life situation of how security problems can change one organization.

This paper intends as follows: Section 2 is the literature review – we defined to take a closer look of various fields in computer security or information security and this look takes a tour into technology and formal methodology; Section 3 describes a real world case study based on real security incidents and we take a look at the improvement that can be done in an organization if we have concerns about security; Section 4 is the future research directions chapter where all key points inside the work is focused and what can be done to improve in the future. The conclusion of this proposal and the next steps to be taken are presented in Section 5.

LITERATURE REVIEW

The security problem of ERP starts before implementing in the organizations, ie, starts in the development phase and in software development companies. Traditionally companies that produce software don’t have security concerns, in the initial stages of development, and don’t have the human resources with expertise in this field. There are some concerns in terms of users and passwords and the need to create a model for privileges inside the software, but the focus of professional in software development are the features and purpose of the operation of the product, according to customer specifications or market where the software is located. There is a gap between software development and the field of computer security and information security. We found highly specialized human resources in software development and highly specialized human resources in computer security. The problem lies in the lack of cooperation and communication between these two fields in the area of information and technology (van Wyk & McGraw, 2005).

The software development companies wake up to this issue only after the implementation of software to their customers and when security incidents happen. Creating a culture of interdisciplinary work between software development and computer security can lead to the development of a top quality product and avoid many future problems in the implementation of systems. It is not only necessary to implement an interdisciplinary culture between the two fields, it is necessary to create models for the various specialists to communicate and understand the concerns and both parties, because the human resources software development does not dominate the themes of

Recommend this product to your librarian:
www.igi-global.com/e-resources/library-recommendation/?id=107

Related Content

The Intelligent Enterprise
www.igi-global.com/chapter/intelligent-enterprise/24746?camid=4v1a

Analysing the Impact of Enterprise Governance of IT Practices on Business Performance
www.igi-global.com/chapter/analysing-impact-enterprise-governance-practices/68042?camid=4v1a

The Application of Fuzzy Performance Modelling Procedures in Extended Enterprise Performance Measurement
www.igi-global.com/chapter/application-fuzzy-performance-modelling-procedures/47463?camid=4v1a

Advancing Organizational Alignment Decisions: Insights from the Structural Alignment Theory to the Business - IT Alignment Problem
www.igi-global.com/article/advancing-organizational-alignment-decisions/206237?camid=4v1a