

THE HACK ATTACK AT WINTER'S TALE PUBLISHING: THE IT MANAGEMENT PERSPECTIVE

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CASE DESCRIPTION

The primary subject matter of this case concerns the vulnerabilities that poor management can expose an organization to as well as the widespread effects that a hacker attack can have on a business' operations. Secondary issues examined include, auditing frameworks to evaluate internal controls, designing a secure network for small start-up businesses, and addressing legal and marketing concerns of a hacked organization. The case has a difficulty level of three or higher and was designed to be taught in a 30 to 45 minute time period with approximately two hours of outside preparation by students. The case can be approached from five perspectives (management, business law, information technology management, forensic accounting and marketing), thus the case can be used in multiple 30 to 45 minute classes. Instructor's notes from each of these perspectives have been written to allow for an integrated approach to learning across the curriculum. The following set of teaching notes evaluates the case from an information technology management perspective.

Evaluation of the case from an information technology management perspective brings several issues to the forefront such as the value of demilitarized zones, updates and patch management, information technology management, effective hiring practices, and data encryption. The case requires students to have an introductory level understanding of business strategy, management information systems, and general business issues.

CASE SYNOPSIS

The case describes Winter's Tale Publishing, an online startup publishing house started by John Winters after successfully publishing his own book. The organization grew quickly but cut corners in several areas which would later come to haunt them. Winter's Tale started a marketing campaign to build interest in a soon-to-be-published tell-all book. Controversy surrounded the publishing of the book and hackers attacked Winter's Tale's server. The hackers accessed personal client author information as well as employee emails and posted the information online for all to see. The case ends with John and his staff meeting to evaluate the circumstances, control the damage, implement a strategy going forward, and determine what led them into such a susceptible state.

STUDENT LEARNING OBJECTIVES

The case can be examined across a business program in multiple courses to provide students with a holistic approach to evaluating the ramifications of business decisions to multiple dimensions of an organization. The case can also be addressed in an individual course. Upon

reading, analyzing and discussing the case from the IT management perspective, students should be able to:

1. Recognize the importance of aligning business and IT strategies.
2. Understand the importance of investing in and managing IT assets, both technical and human.
3. Discuss in-house, contracted, and hybrid IT solutions.

RECOMMENDATIONS FOR TEACHING APPROACHES

The case can be taught from multiple perspectives in several different courses such as upper level marketing, business strategy, business law, management, forensic accounting/auditing, and information technology management. The course can also be taught in a capstone course containing a classroom of diverse business majors. The following case notes address the issues from the perspective of information technology management. Case coverage should take approximately 30 to 45 minutes of course time. Senior level students may be asked to analyze and write up the case using a case analysis template such as:

Background

Main Problem

Minor Problems (stemming from main problem)

Possible Solutions

Recommended Solution and Implementation

Recommended Precautionary Measures and Implementation (What should have been done to prevent this situation?)

A series of questions may be provided to junior level students such as the following.

1. *Describe the one main problem that has created the current situation? Explain why this problem occurred?*

John failed to realize the significant role that IT played in the successful operations of his online business venture. John had not developed an information technology (IT) strategy aligned to, and supporting, his business strategy. Had John developed such an IT strategy, he would have taken more time in researching and hiring an appropriately skilled technician to oversee and run the technical side of his operations.

A skilled IT manager would have designed a robust IT architecture that would adequately meet (and protect) the current IT needs of the organization while allowing for future growth in their operations. When asked to develop an IT infrastructure budget, the IT manager would have been able to itemize and support the current and future needs of their operations.

The IT manager would also have used a mix of local and cloud-based resources to reduce costs and take advantage of the established secure infrastructures developed by companies offering Software as a Services (SaaS) subscriptions.

In addition, had John realized IT's importance in the company, he would hopefully have taken a more active role in oversight and management of Will and the company's IT resources. He would have regularly met with Will to discuss IT operations and plans. When Will came to John with concerns about suspicious network activity, rather than failing to see the gravity of the situation, John would have immediately taken steps to protect their resources.

2. *Describe the technology infrastructure that Winter's Tale Publishing should have used to minimize their vulnerability? Research and create a budget that Will should have proposed to John.*

Examples of some of the technologies that could have been used include:

1. A Web hosting service with electronic commerce capabilities could have been used to host the web site, collect and protect author client data, process registration payments and catalog manuscript submissions. The site could also be used to sell their authors' completed work.
 2. A secure cloud-based file storage system could be used to manage manuscripts through the editing and revision process.
 3. A local area network for back office operations including.
 1. Laptops with docking stations can be purchased for John, Will and Susan.
 2. A local server with server software for sharing files and internal communication.
 3. A printer for the office to share.
 4. A hardware firewall to protect the local network.
 5. A backup storage device and encryption software for storing backup copies of operational data and manuscripts.
 6. A VPN could be used to access data on their cloud-based infrastructure.
 7. An office suite could be purchased for each machine, however they may choose to purchase licenses for a cloud-based option.
 8. Virus detection software should be installed on each machine as well as firewalls.
 9. Network monitoring and intrusion detection software.
3. *What is the difference between Software as a Service and Platform as a Service? Could Winter's Tale benefit by using one or both of these services?*

Software as a Service (SaaS) refers to software hosted and maintained on a third party provider's network. Access to the software is sold to customers on a subscription basis. The provider maintains the hardware, software and Internet connection to their subscribed services.

Platform as a Service (PaaS) refers to the hosting of a platform for housing user developed applications. The client develops and runs the application that is stored on the provider's server. The PaaS provider maintains the underlying infrastructure.

Because Winter's Tale Publishing has limited resources, their needs could most likely be met by a SaaS provider. They could purchase a Web site with e-commerce capabilities from a company that builds and hosts e-commerce sites and focuses upon keeping their services up-to-date and secure. Winter's Tale could also purchase cloud-based access to Microsoft Office as well as QuickBooks for performing their back office operations.

4. *Describe one management/IT security model that could be used to assess the situation or that should have been used to develop a secure system? Which model did you select and why? What benefits could this model contribute? Apply the model and explain your findings.*

Instructors could highlight a number of models for decision making, IT management or IT security such as the Value Chain model, Clark-Wilson Security Model or the OSI model.

4. *What do you think the solution to their current problem should be now?*

Winter's Tale Publishing needs to take their server offline to prevent further damage. They need to determine what data has been stolen, file a police report, and notify all clients, banks, credit card companies and parties. Winter's Tale Publishing needs to immediately hire a security firm to assist them in determining the source of the hacking attack and in getting the data removed from the Internet. They will need to work with their lawyer, the security company and the police to attempt to process charges against the attacker.

Winter's Tale Publishing may wish to create a temporary Web site on a third-party server to serve as an online presence for their company. They can also use this site to provide their version of the situation as well as keep the public updated on progress.

John should hire an IT consulting company, specializing in security and e-services, to assist him in going forward. John should also remove Will from immediate contact with the data. However, the third party consulting company will need to work with Will to more quickly understand Winter's Tale Publishing's systems and the extent of their vulnerabilities. John will need to work with the consultants to determine the best IT options for the publishing company and to assist him in their implementation. Because Winter's Tale Publishing is a relatively small operation, they should consider evaluating third party cloud-based solutions. If Winter's Tale Publishing goes with trusted third party providers, they may choose to develop a contract with the IT consulting company to provide advice and direction as needed. If an in-house IT person is deemed necessary, the consulting company should be retained to assist him in hiring someone with superior skills to fill this role. Once an IT manager has been selected, that person should work with John to develop an IT vision and strategy aligned with those of the business to provide guidance going forward.

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