#1 Review the following scenario. Then complete the step-by-step instructions.

A small U.S. health care clinic specializing in delivering primary-care services experienced a security incident on a Tuesday morning, at approximately 9:00 a.m. Several employees reported that they were unable to use their computers to access files like medical records. Business operations shut down because employees were unable to access the files and software needed to do their job.

Additionally, employees also reported that a ransom note was displayed on their computers. The ransom note stated that all the company's files were encrypted by an organized group of unethical hackers who are known to target organizations in healthcare and transportation industries. In exchange for restoring access to the encrypted files, the ransom note demanded a large sum of money in exchange for the decryption key.

The attackers were able to gain access into the company's network by using targeted phishing emails, which were sent to several employees of the company. The phishing emails contained a malicious attachment that installed malware on the employee's computer once it was downloaded.

Once the attackers gained access, they deployed their ransomware, which encrypted critical files. The company was unable to access critical patient data, causing major disruptions in their business operations. The company was forced to shut down their computer systems and contact several organizations to report the incident and receive technical assistance.

#2 INCIDENT FINAL REPORT

Executive summary

The organization experienced a security incident on December 28, 2022, at 7:20 p.m., PT, during which an individual was able to gain unauthorized access to customer personal identifiable information (PII) and financial information. Approximately 50,000 customer records were affected. The financial impact of the incident is estimated to be $100,000 in direct costs and potential loss of revenue. The incident is now closed and a thorough investigation has been conducted.

Timeline

At approximately 3:13 p.m., PT, on December 22, 2022, an employee received an email from an external email address. The email sender claimed that they had successfully stolen customer data. In exchange for not releasing the data to public forums, the sender requested a $25,000 cryptocurrency payment. The employee assumed the email was spam and deleted it.

On December 28, 2022, the same employee received another email from the same sender. This email included a sample of the stolen customer data and an increased payment demand of $50,000.

On the same day, the employee notified the security team, who began their investigation into the incident. Between December 28 and December 31, 2022, the security team concentrated on determining how the data was stolen and the extent of the theft.

Investigation

The security team received the alert and traveled on-site to begin the investigation.

The root cause of the incident was identified as a vulnerability in the e-commerce web application. This vulnerability allowed the attacker to perform a forced browsing attack and access customer transaction data by modifying the order number included in the URL string of a purchase confirmation page. This vulnerability allowed the attacker to access customer purchase confirmation pages, exposing customer data, which the attacker then collected and exfiltrated.

After confirming the web application vulnerability, the security team analyzed the web application access logs. The logs indicated that the attacker accessed the information of thousands of purchase confirmation pages.

Response and remediation

The organization collaborated with the public relations department to disclose the data breach to its customers. Additionally, the organization offered free identity protection services to customers affected by the incident.

After the security team reviewed the associated web server logs, the cause of the attack was very clear. There was a single log source showing an exceptionally high volume of sequentially listed customer orders.

Recommendations

To prevent future recurrences, we are taking the following actions:

- Perform routine vulnerability scans and penetration testing.
- Implement the following access control mechanisms:
    - Implement allowlisting to allow access to a specified set of URLs and automatically block all requests outside of this URL range.
    - Ensure that only authenticated users are authorized access to content.