

Abstract

This is a security audit report for a made up company called “Botium Toys”. This security audit report was offered to me by the Google Cybersecurity Certification. My work is below the report. I created Controls and Compliance checklists as well as recommendations for the stakeholders of “Botium Toys” to improve their security posture.

Botium Toys: Scope, goals, and risk assessment report

Scope and goals of the audit

Scope: The scope of this audit is defined as the entire security program at Botium Toys. This includes their assets like employee equipment and devices, their internal network, and their systems. You will need to review the assets Botium Toys has and the controls and compliance practices they have in place.

Goals: Assess existing assets and complete the controls and compliance checklist to determine which controls and compliance best practices that need to be implemented to improve Botium Toys’ security posture.

Current assets

Assets managed by the IT Department include:

- On-premises equipment for in-office business needs
- Employee equipment: end-user devices (desktops/laptops, smartphones), remote workstations, headsets, cables, keyboards, mice, docking stations, surveillance cameras, etc.
- Storefront products available for retail sale on site and online; stored in the company’s adjoining warehouse

- Management of systems, software, and services: accounting, telecommunication, database, security, ecommerce, and inventory management
- Internet access
- Internal network
- Data retention and storage
- Legacy system maintenance: end-of-life systems that require human monitoring

Risk assessment

Risk description

Currently, there is inadequate management of assets. Additionally, Botium Toys does not have all of the proper controls in place and may not be fully compliant with U.S. and international regulations and standards.

Control best practices

The first of the five functions of the NIST CSF is Identify. Botium Toys will need to dedicate resources to identify assets so they can appropriately manage them. Additionally, they will need to classify existing assets and determine the impact of the loss of existing assets, including systems, on business continuity.

Risk score

On a scale of 1 to 10, the risk score is 8, which is fairly high. This is due to a lack of controls and adherence to compliance best practices.

Additional comments

The potential impact from the loss of an asset is rated as medium, because the IT department does not know which assets would be at risk. The risk to assets or fines from governing bodies is high because Botium Toys does not have all of the necessary controls in place and is not fully adhering to best practices related to compliance regulations that keep critical data private/secure. Review the following bullet points for specific details:

- Currently, all Botium Toys employees have access to internally stored data and may be able to access cardholder data and customers' PII/SPII.

- Encryption is not currently used to ensure confidentiality of customers' credit card information that is accepted, processed, transmitted, and stored locally in the company's internal database.
- Access controls pertaining to least privilege and separation of duties have not been implemented.
- The IT department has ensured availability and integrated controls to ensure data integrity.
- The IT department has a firewall that blocks traffic based on an appropriately defined set of security rules.
- Antivirus software is installed and monitored regularly by the IT department.
- The IT department has not installed an intrusion detection system (IDS).
- There are no disaster recovery plans currently in place, and the company does not have backups of critical data.
- The IT department has established a plan to notify E.U. customers within 72 hours if there is a security breach. Additionally, privacy policies, procedures, and processes have been developed and are enforced among IT department members/other employees, to properly document and maintain data.
- Although a password policy exists, its requirements are nominal and not in line with current minimum password complexity requirements (e.g., at least eight characters, a combination of letters and at least one number; special characters).
- There is no centralized password management system that enforces the password policy's minimum requirements, which sometimes affects productivity when employees/vendors submit a ticket to the IT department to recover or reset a password.
- While legacy systems are monitored and maintained, there is no regular schedule in place for these tasks and intervention methods are unclear.
- The store's physical location, which includes Botium Toys' main offices, store front, and warehouse of products, has sufficient locks, up-to-date closed-circuit television (CCTV) surveillance, as well as functioning fire detection and prevention systems.

Controls assessment checklist

Yes	No	Control
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Least Privilege
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Disaster recovery plans
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Password policies
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Separation of duties
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Firewall
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Intrusion detection system (IDS)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Backups
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Antivirus software
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Manual monitoring, maintenance, and intervention for legacy systems
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Encryption
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Password management system
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Locks (offices, storefront, warehouse)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Closed-circuit television (CCTV) surveillance
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fire detection/prevention (fire alarm, sprinkler system, etc.)

Compliance checklist

Payment Card Industry Data Security Standard (PCI DSS)

Yes	No	Best practice
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Only authorized users have access to customers' credit card information.

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|--------------------------|-------------------------------------|--|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Credit card information is stored, accepted, processed, and transmitted internally, in a secure environment. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Implement data encryption procedures to better secure credit card transaction touchpoints and data. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Adopt secure password management policies. |

General Data Protection Regulation (GDPR)

- | Yes | No | Best practice |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | E.U. customers' data is kept private/secured. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | There is a plan in place to notify E.U. customers within 72 hours if their data is compromised/there is a breach. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Ensure data is properly classified and inventoried. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Enforce privacy policies, procedures, and processes to properly document and maintain data. |

System and Organizations Controls (SOC type 1, SOC type 2)

- | Yes | No | Best practice |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | User access policies are established. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Sensitive data (PII/SPII) is confidential/private. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Data integrity ensures the data is consistent, complete, accurate, and has been validated. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Data is available to individuals authorized to access it. |
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Recommendations for the Stakeholders

Overall, *Botium Toys* is in need of some serious reprisal of their security posture. As for their Physical Controls, they have completely fulfilled the demands of this assessment. They are fully equipped with locks, CCTV, and fire detection/prevention systems. When it comes to all of the other controls they are severely lacking. The category of controls that needs the most revamping is Administrative Controls. Reassess every single control in this category to make sure customer PII/SPII is fully secured and that employees can only access data they need to access. Additionally, a Disaster Plan needs to be created because the lack of controls in this category is so dismal that a disaster is inevitable, and without a Disaster Plan in place I fear what kind of consequences your company and its customers could face. The Technical Controls are not as abysmal. A firewall and antivirus software are both present, which meets the requirements of the assessment. But, your company is missing all of the other Technical Controls. It is highly recommended you implement the rest of these controls as soon as possible. When it comes to Compliance, your company complies with GDPR pretty well. The only requirements you are not fulfilling is that your E.U. customer's data is neither private nor secure, and your data is not properly classified and inventoried. Once you implement the Administrative and Technical Controls you are missing, you will satisfy this requirement and be in full compliance with GDPR. As for PCI DSS, you have not met any of the requirements to be in compliance. As previously stated, you must implement the missing Administrative and Technical Controls as soon as possible, then compliance will be achieved. Finally, for SOC type 1 and type 2 the only requirement you are currently fulfilling is that you have data integrity. In closing, in order to pass the Control and Compliance Assessment, you need to implement all controls that were checked as "No" in the checklist.