INTIGRITI

FROM POLICY TO COMPLIANCE

The essential role of vulnerability disclosure

Navigating the PSTI Act

EBOOK

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Introduction

As the implementation date of the Product Security and Telecommunications Infrastructure (PSTI) Act approaches, security professionals must understand and prepare for the regulatory changes it brings.

Commencing on 29th April 2024, this legislation marks a significant milestone in product security requirements. The PSTI Act aims to enforce a minimum standard for all IoT-driven consumer products distributed within the UK market.

This guide explains the PSTI Act's implications and the steps needed to follow it correctly.

What is the PSTI Act?

The Product Security and Telecommunications Infrastructure (PSTI) Act is a legislative initiative introduced in the UK. Its goal is to address cybersecurity and privacy vulnerabilities associated with consumer-connected devices, often referred to as the Internet of Things (IoT). The PSTI Act comprises two main sections:

Product security

Part 1 focuses on setting minimum security requirements for consumer connectable products to safeguard against cyber threats and attacks. It mandates manufacturers, importers, and distributors to follow specific security standards and protocols outlined in the legislation.

Telecommunications infrastructure

Part 2 aims to bolster the deployment and expansion of mobile, fiber-optic, and gigabit-capable networks across the UK. It entails legislative amendments, including changes to the Electronic Communications Code, to facilitate the development of robust telecommunications infrastructure.

For this guide, we're focusing on **Part 1 of the PSTI Act**[1].

[1] go.intigriti.com/part-1-of-the-act

What are the new security requirements?

The PSTI Act aims to enforce a minimum standard for all IoT-driven consumer products distributed within the UK market.

Effective April 29, 2024, the Office for Product Safety and Standards (OPSS) will oversee the enforcement of the PSTI Act 2022 and the 2023 Regulations, operating under an MOU with the Department for Science, Innovation and Technology (DSIT).

PSTI Act
Security requirements

No default password

Organizations must **prohibit default passwords** to prevent easy exploitation, thus safeguarding products from cyberattacks.

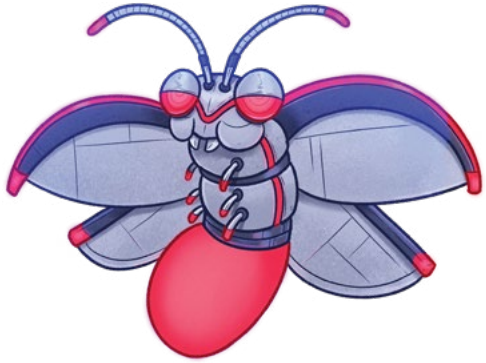
Transparency around security updates

Minimum security update periods must be transparently published and accessible to consumers, specifying the duration and end date of the provided security updates.

Vulnerability reporting processes

Manufacturers should **offer clear reporting instructions, like a vulnerability disclosure policy**, and specify the expected timeline for acknowledging and updating the status of reported security issues.

Who needs to comply with the PSTI Act?



Manufacturers, importers, and distributors of consumer-connectable products must comply with the PSTI Act. Here is the full list of products that the Bill impacts:

- Connected home automation and alarm systems
- Connected cameras, TV's and speakers
- Connected children's toys and baby monitors
- Wearable connected fitness trackers
- Smartphones
- Outdoor leisure products, such as handheld connected GPS devices that are not wearables
- Connected safety-relevant products such as smoke detectors and smart door locks
- Connected appliances, such as washing machines and fridges
- Internet of Things base stations and hubs to which multiple devices connect
- Smart home assistants

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How do you ensure compliance with the PSTI Act?

The PSTI Act includes a self-declaration system, which manufacturers must adhere to. You can find all the information that needs to be included in the self-declaration here[2].

[2]go.intigriti.com/self-declaration

What are the consequences of not meeting the PSTI Act security requirements?

Non-compliance with the PSTI Act's security requirements can lead to **legal penalties, loss of trust, and data breaches**.

Manufacturers who don't comply with the PSTI Act risk receiving penalties, the maximum of which is either £10 million or 4% of an organization's qualifying worldwide revenue, depending on
which is greater.

Regulatory bodies may enforce the act through audits and investigations, while market access and contractual obligations may be restricted. Further, non-compliant organizations risk:

- Damage to their reputation
- Loss of competitive advantage
- Potential market exclusion

Organizations must prioritize adherence to PSTI Act regulations to mitigate these risks and protect their operations and reputation.

How can Intigriti help?

As an industry-leading crowdsourced security testing platform, Intigriti is well-equipped to support organizations in adapting their vulnerability disclosure policies to comply with the PSTI Act.

Our **global community of 90,000+ ethical hackers** (also known as security researchers) carry unique expertise in identifying vulnerabilities and reporting them through a secure process. By partnering with Intigriti, organizations can tap into this vast pool of talent and leverage their skills to identify and address vulnerabilities before malicious actors can exploit them.

What is a vulnerability disclosure policy?

A vulnerability disclosure policy (VDP), also known as responsible disclosure, is a documented set of guidelines and procedures that an organization establishes to define how it handles reports of vulnerabilities in its systems, applications, or products. It serves as a framework for ethical hackers, security researchers, or any external party to responsibly disclose identified vulnerabilities to the organization.

The primary purpose of a VDP is to encourage the responsible reporting of vulnerabilities and establish a clear and transparent process for their **disclosure**, **assessment**, and **remediation**. It provides a channel for security researchers to report vulnerabilities without fear of legal repercussions, as long as they adhere to the guidelines outlined in the policy.

By implementing a well-crafted vulnerability disclosure policy, organizations can:

- Foster a positive relationship with the security researcher community
- Encourage responsible reporting
- Improve their overall security posture by addressing vulnerabilities before they can be exploited by malicious actors

Why is having a VDP important?

Having a vulnerability disclosure policy (VDP) is crucial for several reasons, especially in light of the upcoming security requirement deadline for the PSTI Act. Here are some key reasons why having a VDP is important:

1. Encourages responsible reporting

A VDP provides a clear and defined process for security researchers and ethical hackers to report vulnerabilities they discover responsibly. It establishes a channel for them to disclose vulnerabilities without resorting to public disclosure.

2. Enhances security posture

A VDP allows organizations to identify and address vulnerabilities before they can be exploited by malicious actors. By receiving reports from external parties, organizations can leverage the expertise of security researchers to identify weaknesses that may have been overlooked during internal security assessments.

3. Demonstrates commitment to security

Implementing a VDP demonstrates an organization's commitment to security and its willingness to work collaboratively with the security community. It sends a message that the organization takes security seriously and values the contributions of ethical hackers and researchers. This can enhance the organization's reputation and build trust between customers, partners, and stakeholders.

4. Legal compliance

Organizations will be required to have robust security practices in place as part of the PSTI Act. A VDP is essential to these practices, as it outlines the organization's approach to vulnerability management and disclosure.

5. Mitigates legal risks

By clearly defining the rules of engagement and providing safe harbor provisions, organizations can establish a legal framework that protects both the organization and the security researchers. This can help prevent potential legal disputes and encourage more researchers to responsibly disclose vulnerabilities.

6. Collaboration with the security community

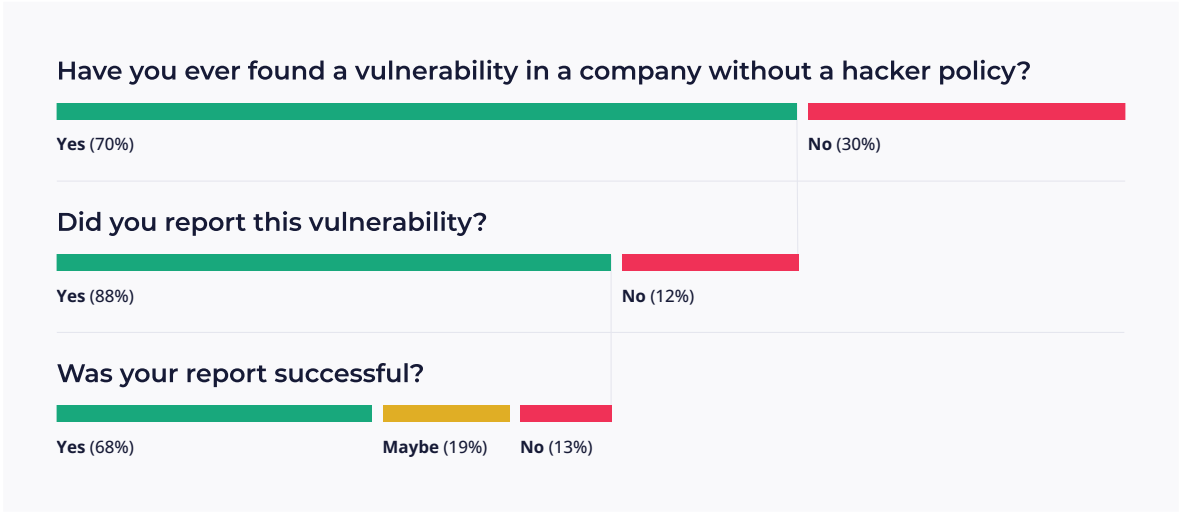
A VDP fosters collaboration between organizations and the security community. It encourages open communication, knowledge sharing, and the exchange of best practices. By engaging with the security community, organizations can tap into a vast pool of expertise and stay informed about emerging threats and vulnerabilities.

Vulnerability disclosure statistics

Without a VDP, 44% of vulnerability submissions aren't successfully reported

We asked our community how they report vulnerabilities outside a bug bounty program. Concerningly, 70% have identified vulnerabilities before but found no vulnerable disclosure program to report it. Of that group, 12% didn't escalate the report. For those that did, 32% of them said the report got lost in the process or weren't sure whether it was successfully reported. That's 44% of the risks that remain undetected.

Deploying a VDP will help lower the risk of a vulnerability not reaching your security team or getting published publicly (such as on social media).



What to include in your policy

A well-defined VDP typically includes the following elements:

01 **Company background**
Help the researcher know what is important to you from a security standpoint by providing some context and background information.

02 **Scope**
Clearly define the systems, applications, or products that are covered by the policy.

03 **Reporting channels**
Specify the methods and channels through which vulnerabilities can be reported, such as email, web forms, or dedicated bug bounty platforms.

04 **Responsible disclosure**
Outline the expectations for responsible disclosure, including guidelines on how to avoid unauthorized access, data exfiltration, or disruption of services during vulnerability testing.

05 **Acknowledgment and response**
Describe the organization's commitment to acknowledging receipt of vulnerability reports and providing timely responses to the reporters.

06 **Assessment and validation**
Explain the process by which reported vulnerabilities will be assessed, validated, and prioritized based on their severity and potential impact.

Tip! Head to Intigriti's website to see examples of **responsible disclosure policies**[3]. Alternatively, numerous online sources offer VDP templates for organizations to use. For example, **The Coordinated Vulnerability Disclosure Template**[4], published by a working group of the U.S. National Telecommunications and Information Administration.

07 **Remediation and disclosure**

Outline the steps the organization will take to address and remediate the reported vulnerabilities, including timelines for fixes and subsequent disclosure to the public.

08 **Legal considerations**

Clarify any legal protections or safe harbor provisions offered to security researchers who adhere to the policy's guidelines.

09 **Communication and transparency**

Emphasize your organization's commitment to maintaining open and transparent communication with reporters throughout the vulnerability disclosure process.

[3]go.intigriti.com/programs
[4]go.intigriti.com/coordinated-vulnerability-disclosure-template

Hosting your VDP on your website

Pros and cons

Hosting a VDP on your own website has both pros and cons. Here are some considerations:

Pros

Branding and transparency

Hosting your policy on your website maintains branding consistency and alignment with your organization's values, enhancing transparency and building trust with security researchers and stakeholders.

Control

Hosting your VDP or RDP on your own website gives you full control over the content, format, and processes. You can tailor it to your organization's specific needs and requirements.

Direct communication

Hosting a VDP on your website enables direct communication with security researchers, offering a clear channel for vulnerability reporting and facilitating interaction for clarification.

Integration with internal processes

Hosting your VDP on your website integrates with internal vulnerability management, aligning reporting and remediation workflows with incident response and security operations procedures.

Cons

Limited reach

Hosting your VDP on your website might limit its visibility. Researchers may prefer reporting through bug bounty platforms for broader exposure and potential rewards.

Resource-intensive

Hosting your VDP on your website demands dedicated resources for triaging, validating reports, responding to inquiries, and coordinating remediation. This creates challenges for organizations with limited security expertise.

Lack of triage support

Bug bounty platforms typically offer their own security experts for triaging reports, unlike hosting your policy internally, which ordinarily requires your security team to handle validation.

Reputation management

Hosting the VDP or RDP on your own website puts the responsibility of managing the reputation and credibility of the program solely on your organization. Any mishandling or miscommunication can impact your organization's reputation among security researchers.

Using a bug bounty platform to manage vulnerability disclosure

Pros and cons

Pros

Centralized reporting

Hosting your VDP on a bug bounty platform centralizes reporting, streamlining the process and ensuring proper documentation and tracking of vulnerability submissions.

Access to skilled researchers

Bug bounty platforms attract highly talented, proactive ethical researchers with a wide range of skillsets. Hosting your VDP there provides access to this community, enhancing vulnerability discovery and mitigation.

Scalability

Bug bounty platforms manage large-scale vulnerability reporting efficiently with infrastructure and processes in place. They triage, validate, and address submissions promptly.

Expert triage and validation

Bug bounty platforms offer in-house security experts for triaging and validating vulnerability reports, lessening the load on your internal team. Intigriti includes this service with all programs, at no additional expense.

Collaboration and communication

Hosting your VDP on a bug bounty platform fosters effective communication and collaboration with security researchers in a secure, structured environment for exchanging information and addressing concerns.

Incentivizing researchers

Bug bounty platforms incentivize researchers with monetary rewards for reporting valid vulnerabilities, motivating active participation in your VDP and increasing critical vulnerability discovery.

Reputation enhancement

Hosting your VDP on a trusted bug bounty platform showcases your commitment to security and responsible vulnerability management, enhancing your reputation among researchers, customers, and stakeholders.

Cons

Platform dependency

Hosting your VDP solely on a bug bounty platform means relying on the platform's infrastructure and processes.

Limited control

The policy may need to adhere to the platform's guidelines and requirements.

Platform reputation

The reputation and credibility of the bug bounty platform hosting your VDP can reflect on your organization. Choosing a reputable platform with a strong track record is important to maintain trust with security researchers and stakeholders.

Cost

Bug bounty platforms typically charge fees for their services, including hosting your VDP. Depending on your organization's budget and resources, this cost may be a consideration.

> It's worth noting that organizations can adopt a hybrid approach by hosting their VDP on their website while also collaborating with bug bounty platforms or other third-party channels. This allows for broader coverage and engagement with the security research community while maintaining control over the disclosure process.

Did you know?

Having a Vulnerability Disclosure Policy (VDP) can help organizations meet various compliance processes and regulations, including:

GDPR (EU): The General Data Protection Regulation (GDPR) mandates appropriate security measures to protect personal data. A VDP demonstrates a commitment to security and proactive vulnerability management, aligning with GDPR requirements.

ISO 27001: The ISO 27001 standard focuses on information security management systems. A VDP can contribute to its compliance by demonstrating that the organization has established processes for identifying and addressing security vulnerabilities.

Cyber Resilience Act: The Cyber Resilience Act is legislation that focuses on enhancing the resilience of organizations and critical infrastructure against cyber threats in Europe. While a VDP may not be explicitly required, having one will align with the spirit of the act by promoting proactive vulnerability management and collaboration with external parties.

Digital Operations Resilience Act: The Digital Operations Resilience Act, due to come into force in January 2025, will aim to achieve the resilience and security of digital operations, particularly in critical sectors. It will establish standards and requirements for organizations to protect their digital infrastructure, systems, and data from cyber threats. A VDP will be seen as a proactive measure to identify and address vulnerabilities, contributing to the overall resilience of digital operations.

NIST Cybersecurity Framework (US): The NIST Cybersecurity Framework provides guidelines for managing cybersecurity risks. A VDP aligns with the framework by promoting proactive vulnerability management and collaboration with external parties.

PCI DSS: The Payment Card Industry Data Security Standard (PCI DSS) requires a secure environment for payment card data. Implementing a VDP demonstrates a commitment to identifying and addressing vulnerabilities that impact payment card data security.

HIPAA: The Health Insurance Portability and Accountability Act (HIPAA) sets standards for protecting sensitive health information. While not explicitly required, a VDP contributes to compliance by demonstrating a commitment to security and vulnerability management.

CCPA: The California Consumer Privacy Act (CCPA) grants rights regarding personal information. Implementing a VDP contributes to compliance by protecting personal data and addressing vulnerabilities promptly.

FISMA (US): The Federal Information Security Management Act (FISMA) establishes security requirements for federal agencies and contractors. A VDP helps meet FISMA requirements by enabling external parties to report vulnerabilities for timely remediation.

SOX (Sarbanes-Oxley Act): SOX mandates financial reporting and internal control requirements. While not explicitly required, a VDP demonstrates a commitment to effective internal controls and addressing security vulnerabilities.

PSD2: Revised Payment Services Directive (PSD2) regulates payment services and enhances security. Implementing a VDP demonstrates a proactive approach to identifying and addressing vulnerabilities in payment systems and customer data.

GLBA: The Gramm-Leach-Bliley Act (GLBA) requires financial institutions to protect customer information. While not mandated, a VDP contributes to compliance by identifying and addressing vulnerabilities impacting customer data security.

About Intigriti

Intigriti is the leading European-based platform for bug bounty and ethical hacking. The platform enables organizations to reduce the risk of a cyberattack by allowing Intigriti's network of security researchers to test their digital assets for vulnerabilities continuously.

Founded in 2016, Intigriti set out to conquer the limitations of traditional security testing. The interactive platform features real-time reports of current vulnerabilities, enabling organizations to obtain greater visibility over their attack surface and remediate issues faster.

Agile Security Testing Powered by the Crowd

What to expect as an Intigriti customer

Conquer the limitations of traditional security testing

Continuously test your digital assets for vulnerabilities by leveraging the expertise of Intigriti's 90,000+ registered security researchers.

Industry-leading support

Only receive unknown, unique, valid, and in-scope vulnerability reports—all submissions are rigorously assessed by our dedicated triage team before we transmit them to the client. This enables your team to stay focused on business-critical tasks. Our offering includes triage, account management, customer success, knowledge base, technical support, and more.

Reduced risk

On average, Intigriti clients receive 53 vulnerability reports within one week of launching a bug bounty program through our platform. Intigriti's support empowers organizations to identify and remediate risks quickly.

Customized pricing

We provide a scalable model that aligns with customer aspirations and program expansion. Clients of all sizes and from various business sectors, use our services.

Information from Q1/2024. We are constantly growing, so please contact our sales department or see our website for an accurate number.

Contact us

Need some help getting started with ethical hackers?
Our experts can help you maximise the success of your bug bounty program. Get in touch today to connect with the brightest and most experienced researchers on the globe.

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Illustrations by Zwoltopia