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Information technology - Security techniques - Vulnerability disclosure (ISO/IEC 29147:2018)

Informationstechnik - Sicherheitstechniken - Bekanntgabe von Sicherheitslücken (ISO/IEC 29147:2018)

Technologies de l'information - Techniques de sécurité - Divulgateion de vulnérabilité (ISO/IEC 29147:2018)

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EUROPEAN STANDARD

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Information technology - Security techniques - Vulnerability disclosure (ISO/IEC 29147:2018)

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Offenlegung von Schwachstellen (ISO/IEC
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European foreword

The text of ISO/IEC 29147:2018 has been prepared by Technical Committee ISO/IEC JTC 1 "Information technology" of the International Organization for Standardization (ISO) and has been taken over as EN ISO/IEC 29147:2020 by Technical Committee CEN/CLC/JTC 13 "Cybersecurity and Data Protection" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2020, and conflicting national standards shall be withdrawn at the latest by November 2020.

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**Information technology — Security
techniques — Vulnerability disclosure**

*Technologies de l'information — Techniques de sécurité —
Divulgateion de vulnérabilité*

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents) or the IEC list of patent declarations received (see <http://patents.iec.ch>).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 27, *Security techniques*.

This second edition cancels and replaces the first edition (ISO/IEC 29147:2014), which has been technically revised.

The main changes compared to the previous edition are as follows:

- a number of normative provisions have been added (summarized in [Annex D](#));
- numerous organizational and editorial changes have been made for clarity.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

This document is intended to be used with ISO/IEC 30111.

Introduction

In the contexts of information technology and cybersecurity, a vulnerability is a behaviour or set of conditions present in a system, product, component, or service that violates an implicit or explicit security policy. A vulnerability can be thought of as a weakness or exposure that allows a security impact or consequence. Attackers exploit vulnerabilities to compromise confidentiality, integrity, availability, operation, or some other security property.

Vulnerabilities often result from failures of a program or system to securely handle untrusted or unexpected input. Causes that lead to vulnerabilities include errors in coding or configuration, oversights in design choices, and insecure protocol and format specifications.

Despite significant efforts to improve software security, modern software and systems are so complex that it is impractical to produce them without vulnerabilities. Risk factors of vulnerabilities include:

- operating and relying on systems that have known vulnerabilities;
- not having sufficient information about vulnerabilities;
- not knowing that vulnerabilities exist.

This document describes vulnerability disclosure: techniques and policies for vendors to receive vulnerability reports and publish remediation information. Vulnerability disclosure enables both the remediation of vulnerabilities and better-informed risk decisions. Vulnerability disclosure is a critical element of the support, maintenance, and operation of any product or service that is exposed to active threats. This includes practically any product or service that uses open networks such as the Internet. A vulnerability disclosure capability is an essential part of the development, acquisition, operation, and support of all products and services. Operating without vulnerability disclosure capability puts users at increased risk.

The term “vulnerability disclosure” is used to describe the overall activities associated with receiving vulnerability reports and providing remediation information. Additional activities such as investigating and prioritizing reports, developing, testing, and deploying remediations, and improving secure development are called “vulnerability handling” and are described in ISO/IEC 30111. The term “disclosure” is also used more narrowly to mean the act of informing a party about a vulnerability for the first time (see 3.2).

Major goals of vulnerability disclosure include:

- reducing risk by remediating vulnerabilities and informing users;
- minimizing harm and cost associated with the disclosure;
- providing users with sufficient information to evaluate risk due to vulnerabilities;
- setting expectations to facilitate cooperative interaction and coordination among stakeholders.

The processes described in this document aim to minimize risk, cost, and harm to all stakeholders. Due to the volume of reported vulnerabilities, lack of accurate and complete information, and other factors involved, it is not possible to create a single, fixed process that applies to every disclosure event.

The normative elements in this document provide minimum requirements to create a functional vulnerability disclosure capability. Vendors should adapt the additional informative guidance in this document to fit their particular needs and those of users and other stakeholders.