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Information technology
Big data reference architecture
Part 4: Security and privacy

Technologies de l'information
Architecture de référence des mégadonnées
Partie 4: Sécurité et confidentialité

Informationstechnik
Big Data Referenzarchitektur
Teil 4: Sicherheit und Datenschutz

Táto norma obsahuje anglickú verziu ISO/IEC 20547-4: 2020.

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POZNÁMKA 2. – Aktuálne informácie o platných a zrušených STN možno získať na webovej stránke www.unms.sk.

ISO/IEC 20546 dosiaľ nezavedená

ISO/IEC 20547-3 dosiaľ nezavedená

ISO/IEC/IEEE 15288 dosiaľ nezavedená

Vypracovanie normy

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Foreword

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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 ISO documents 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).

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 27, *Information security, cybersecurity and privacy protection*.

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.

A list of all parts in the ISO/IEC 20547 series can be found on the ISO website.

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Introduction

Big data refers to the massive amount of digital information collected in various forms from different sources of digital and physical environments. This data is not only generated by traditional means of information exchange, but also from sensors embedded in physical environments, such as city surroundings, transportation vehicles, critical infrastructures, etc. The collection and processing of big data provides additional challenges not inherent in the traditional digital information exchange setting.

This document was developed in response to the worldwide demand for a common baseline of security and privacy aspects for big data architectures to facilitate interoperability in big data systems without compromising privacy, confidentiality, or integrity.

The big data paradigm blurs the security boundaries between data collection, storage and access — areas traditionally addressed independently — that now needs to be confronted holistically with a comprehensive security and privacy foundation, tightly coupled to all architecture components.

Effective standardization of security and privacy is paramount to the development of mutual trust and cooperation amongst big data stakeholders.

Information technology — Big data reference architecture —

Part 4: Security and privacy

1 Scope

This document specifies the security and privacy aspects applicable to the big data reference architecture (BDRA) including the big data roles, activities and functional components and also provides guidance on security and privacy operations for big data.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes the requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 20546, *Information technology — Big data — Overview and vocabulary*

ISO/IEC 20547-3, *Information technology — Big data reference architecture — Part 3: Reference architecture*

ISO/IEC/IEEE 15288, *Systems and software engineering — System life cycle processes*

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