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Information technology — Cloud computing — Taxonomy based data handling for cloud services

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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 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).

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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 38, *Cloud Computing and Distributed Platforms*.

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.

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Introduction

Many of the policies and practices in place for handling data in the cloud computing ecosystem need to be described based on the category of the data they address. For instance, personally identifiable information (PII) impose specific data management requirements not only in terms of security but also with regard to mechanisms that allow cloud service users to whom such data relate to exercise control on the usage and transfer of such data. Organisational data such as cloud service usage information and telemetry data from cloud services, which can be used for operational purposes such as improvement of service quality, may have to fulfil specific quality requirements to be useful for a given application.

Customer content data can be related to intellectual property rights and possibly needs appropriate protection by the cloud service provider (CSP). Certain data can be transferred from one jurisdiction to another. Depending on their data category, different instruments (multi-national laws, corporate binding rules, bilateral agreements) are applicable to enable such transfers.

When such policies and practices are to be described, it is helpful to do so in a structured and consistent way so that they can be better expressed, evaluated, analysed, and compared by the stakeholders in the cloud computing ecosystem. ISO/IEC 19944 provides a comprehensive taxonomy defining a fine-grained system of data categories that can be applied to various domains of policies for the handling of data in a cloud computing ecosystem such as cross border data transfer, data geolocation, data usage, data access and data portability, data management including data quality management and data security, or data governance, and provides guidelines on how to describe data handling policies and practices within codes of conduct (CoC).

This document describes such a structured and common approach to express any desired data handling policies and practices. It is important to emphasize that the policies and practices themselves are out of the scope of this document. This document describes a common structure and approach to express any desired data handling policies and practices. It is important to emphasize that the policies and practices are out of the scope of this document. A set of examples from data handling domains are provided in the document as guidance to understand how to use ISO/IEC 19944 regarding application of policies and analysis of policy requirements to such domains.

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1 Scope

This document:

— describes a framework for the structured expression of data-related policies and practices in the cloud computing environment, based on the data taxonomy in ISO/IEC 19944;

— provides guidelines on application of the taxonomy for handling of data based on data subcategory and classification;

— covers expression of data-related policies and practices including, but not limited to data geolocation, cross border flow of data, data access and data portability, data use, data management, and data governance;

— describes how the framework can be used in codes of conduct for practices regarding data at rest and in transit, including cross border data transfer, as well as remote access to data;

— provides use cases for data handling challenges, i.e. control, access and location of data according to ISO/IEC 19944 data categories.

This document is applicable primarily to cloud service providers, cloud service customers (CSCs) and cloud service users, but also to any person or organization involved in legal, policy, technical or other implications of taxonomy-based data management in cloud services.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes 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 17788, *Information technology — Cloud computing — Overview and vocabulary*

ISO/IEC 19944, *Information technology — Cloud computing — Cloud services and devices: Data flow, data categories and data use*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 17788, ISO/IEC 19944 and the following apply:

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
codes of conduct
CoC
agreed set of behaviours between organisations to enhance customer and/or partner outcomes and experiences

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