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Cloud computing and distributed platforms — Data flow, data categories and data use —

Part 2: Guidance on application and extensibility

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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 or www.iec.ch/members_experts/refdocs).

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A list of all parts in the ISO/IEC 19944 series can be found on the ISO and IEC websites.

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Introduction

ISO/IEC 19944-1 provides a data taxonomy, data processing and use categories and other descriptive facets that can be applied to data. All aspects of ISO/IEC 19944-1 are extensible to meet the needs of diverse users. The standardized ability to categorize data, describe uses of data and apply other facets is useful in several scenarios including the application of policy to data and in describing the use of data to stakeholders.

The aim of this document is to assist users of ISO/IEC 19944-1 by providing examples and guidance for its use across several domains. Additionally, this document provides users who need to extend ISO/IEC 19944-1 with examples and guidance.

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Cloud computing and distributed platforms — Data flow, data categories and data use —

Part 2: Guidance on application and extensibility

1 Scope

This document provides guidance on the application of the taxonomy and use statements from ISO/IEC 19944-1 in real world scenarios, and how to develop extensions to the data taxonomy, data processing and use categories and data use statements.

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 19944-1:2020, *Cloud computing and distributed platforms — Data flow, data categories and data use — Part 1: Fundamentals*

ISO/IEC 22123-1, *Information technology — Cloud computing — Part 1: Vocabulary*

ISO/IEC 22989,[1)] *Information technology — Artificial intelligence — Artificial intelligence concepts and terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19944-1, ISO/IEC 22123-1, ISO/IEC 22989 and the following apply.

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

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

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

3.1
Internet of Things
IoT
infrastructure of interconnected entities, people, systems and information resources together with services which processes and reacts to information from the physical world and virtual world

[SOURCE: ISO/IEC 20924:2021, 3.2.1]

3.2
PII principal
natural person to whom the personally identifiable information (PII) relates

Note 1 to entry: Depending on the jurisdiction and the particular data protection and privacy legislation, the synonym “data subject” can also be used instead of the term “PII principal”.

1) Under preparation. Stage at the time of publication: ISO/IEC FDIS 22989.

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[SOURCE: ISO/IEC 29100:2011, 2.11]

4 Abbreviated terms

AI Artificial Intelligence

CSA Cloud Service Agreement

CSC Cloud Service Customer

CSP Cloud Service Provider

DNN Deep Neural Network

EV Electric Vehicle

IaaS Infrastructure as a Service

IoT Internet of Things

IPR Intellectual Property Rights

OPD Organizational Protected Data

PaaS Platform as a Service

PII Personally Identifiable Information

SKU Stock Keeping Unit

5 Presentation of ISO/IEC 19944-1

To improve transparency and guidance about data flows and data use, ISO/IEC 19944-1 names and describes the flows of data between a device and a supporting cloud service, and how to describe the use of different categories of data by the CSP.

ISO/IEC 19944-1 provides a comprehensive set of elements which can be used to:

— assign a data category to a given dataset, e.g. personally identifiable information, organizational protected data, customer content data;

— provide a set of actions applied to data, e.g. use to provide a service, to optimize it, to provide marketing information;

— define the qualifiers for the level of de-identification applied to a dataset, e.g. "identified", "anonymized", "aggregated";

— describe a use of a certain category of data for a specified purpose with a scope of its usage.

To maintain trust between the stakeholders in the ecosystem of cloud services and to meet the requirements of laws and regulations, it is necessary for service providers to be transparent about their use of the various data types that flow within the ecosystem. ISO/IEC 19944-1 also deals with organizational data and the need to treat some organizational data in particular ways in order to ensure properties such as confidentiality and integrity are maintained.

ISO/IEC 19944-1 introduces the concept of data facets, and data facets are used to extend the expressiveness of data use statements, including adding the concept of which individuals or organizations have control over data.

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