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Interested committees:

Title: Draft BS ISO/IEC 20151 Information technology — Cloud computing and distributed platforms — Dataspace concepts and characteristics.

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Introduction

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- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT International Standard

Information technology — Cloud computing and distributed platforms — Dataspace concepts and characteristics

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ISO/IEC DIS 20151

ISO/IEC JTC 1/SC 38

Secretariat: **ANSI**

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2025-07-21

Voting terminates on:
2025-10-13

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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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For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/IEC JTC 1, 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.

Introduction

The use of data is now part of every aspect of the organization and the ecosystems in which it operates – such as supply chains, marketplaces and regulatory jurisdictions. As such, the value derived from the use of data is an important part of most economies.

When an organization itself generates data, it can govern, manage and extract the appropriate value from that data. However, much of the data used by an organization comes from others – along with possible restrictions on its use. Similarly, some of the data the organization generates can, with agreement, be used by others. To facilitate this use of data across multiple organisations – and to respect the rights and obligations associated with data while doing so – a method of trusted data sharing is needed.

Dataspaces provide a scalable and more automated approach to organizational agreements, and supporting software services that together enable trusted data sharing..

By providing clarity on the description of the data that is available to be shared as well as the agreed uses for the shared data, both the data provider and data recipient can make clear choices about data and improve its operational management as well as its overall governance and value.

This document provides an overview and concepts of dataspaces and their essential and optional characteristics. It builds on other cloud computing and distributed platforms documents such as ISO/IEC 22123-1^[1], ISO/IEC 23751^[2] and ISO/IEC 5140^[3] which describe cloud computing, data sharing agreements and multi-cloud concepts.

Information technology — Cloud computing and distributed platforms — Dataspace concepts and characteristics

1 Scope

This document provides the foundational concepts for dataspaces and their essential characteristics. This document is applicable to all organizations.

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

3 Terms and definitions

For the purposes of this document, the following terms and definitions given in ISO/IEC 22123-1, 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 <http://www.iso.org/obp>

3.1 dataspace

data space
governance framework (3.12) and supporting services to build *trustworthiness* (3.10) and enable *data sharing* (3.6) through an agreed set of policies, semantic models, protocols and processes

3.2 dataspace participant

participant
party that is acting in a *dataspace participant role* (3.3)

Note 1 to entry: By being accepted to be a participant in the dataspace, the party agrees to the governance arrangements and therefore the policies of the dataspace.

3.3 dataspace participant role

participant role
set of activities within a *dataspace* (3.1) for the purpose of *data sharing* (3.6) or related activities

Note 1 to entry: Related activities can include auditing or observing roles that do not include data sharing or governance activities.

3.4 dataspace governance authority role

DSGA role
set of activities provided by one or more parties that establishes, governs, manages and enforces the technical policies and business rules of a *dataspace* (3.1)

3.5

data policy

human and machine-readable set of rights and obligations regarding access and use of data

3.6

data sharing

access to the same data by more than one authorized entity

Note 1 to entry: Use of the data can be synchronous or asynchronous.

Note 2 to entry: Data can be shared, for example, (i) by allowing access to, or the execution of operations over, the original dataset, or (ii) by giving a copy of the data to the interested entity.

Note 3 to entry: The way in which data is shared fundamentally influences the available controls and the statements needed in a data sharing agreement.

[SOURCE: ISO/IEC 23751:2022^[4], 3.7, modified - removed 'or processing of']

3.7

data sharing contract

formal and legally binding agreement between *dataspace participants* (3.3) containing policies, terms and conditions for *data sharing* (3.6)

Note 1 to entry: Data sharing contracts usually contain information about access to data, including its metadata, and data use.

Note 2 to entry: A data sharing contract is usually much more specific than a data sharing agreement which is often broader and often at an organizational level.

3.8

data use

handling or dealing with data for a specific purpose

[SOURCE: ISO/IEC 5207:2024^[5](en), 3.30, modified – Note 1 to entry removed]

3.9

trust

decision by an entity to assume that a product, service or entity will behave as expected for a given circumstance

3.10

trustworthiness

set of verifiable evidence that can be used to form *trust* (3.9)

3.11

governance

human-based system comprising directing, overseeing and accountability

[SOURCE: ISO/IEC 38500:2024^[6], 3.3]

3.12

governance framework

strategies, policies, decision-making structures and accountabilities through which the organization's *governance* (3.11) arrangements operate

[SOURCE: ISO/IEC TR 38502:2017^[7], 3.1]