



BSI Standards Publication

Information technology — Cloud computing — Framework of trust for processing of multi-sourced data

National foreword

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Foreword

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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.

Introduction

There are many business and technical aspects relating to the processing of multi-sourced data, but trust between cloud service users, cloud service customers and the cloud service provider(s) is a significant market issue.

Cloud processing of multi-sourced data is in its early stages of development in the industry, and it is anticipated that specific customer requirements will differ and will evolve over time. Industry clouds have begun to form, and in some cases, their primary purpose is to bring multi-sourced data together from participants in specific industry or community sectors to achieve common objectives. Trust may be required in these scenarios because of regulations, agreements or policies attached to the data.

Processing of multi-sourced data will be essential to artificial intelligence applications along with machine learning on financial, transportation, energy, manufacturing, agricultural and government data. Trust in the data, in the cloud service provider(s), in the processing functions and the outcomes and among the parties is essential to the success of these projects.

The elements of trust described in this report pertain to Personally Identifiable Information (PII), Organizational Confidential Data (OCD) or any other kind of data that can be part of multi-sourced data.

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Information technology — Cloud computing — Framework of trust for processing of multi-sourced data

1 Scope

This document describes a framework of trust for the processing of multi-sourced data that includes data use obligations and controls, data provenance, chain of custody, security and immutable proof of compliance as elements of the framework.

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*

3 Terms and definitions

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

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

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

chain of custody

demonstrable possession, movement, handling, and location of material from one point in time until another

[SOURCE: ISO/IEC 27050-1:2011, 3.1]

3.2

data

recorded information

[SOURCE: ISO 27005:2007, 3.11]

3.3

data processing

systematic performance of operations upon data

[SOURCE: ISO 2382:2015, 2121276, modified — Notes 1 to 4 to entry have been deleted and the alternate term “automatic data processing” has been deleted.]

3.4

data set

logically meaningful grouping of data

[SOURCE: ISO 8000-2:2018, 3.2.4, modified — EXAMPLES 1 and 2 have been deleted.]