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Technical Report

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Information technology — Cloud computing — Best practices for using the cloud service level agreement (SLA) metric model

Technologies de l'information — Informatique en nuage — Bonnes pratiques pour l'utilisation du modèle métrique d'accord de niveau de service (SLA) dans le Cloud

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CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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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*.

This second edition cancels and replaces the first edition (ISO/IEC TR 23951:2020), which has been technically revised.

The main changes are as follows:

— alignment with ISO/IEC 22123;

— references to ISO/IEC 17788 and ISO/IEC 17789 have been changed to ISO/IEC 22123.

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 and www.iec.ch/national-committees.

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Introduction

In most cases, cloud service providers (CSPs) and cloud service customers (CSCs) negotiate service level agreements (SLAs) which include service level objectives (SLOs) and service qualitative objectives (SQOs) for which CSPs make commitments. The commitments described in SLAs are expected to be measured against actual performance of the service to ensure compliance with the SLA. How actual performance compares against commitments in SLAs is explained in ISO/IEC 19086-2. Cloud SLAs are covered in ISO/IEC 19086-1 and in ISO/IEC 19086-4.

The metric model in ISO/IEC 19086-2 establishes common terminology, defines a model for specifying metrics for cloud SLAs, and includes applications of the model with examples. This document provides guidance and examples on using the metric model to compose the calculation of a cloud service performance measure in order to compare against an SLA commitment. A few examples from the SLOs listed in ISO/IEC 19086-1:2016, Clause 10 are given in the document, such as Cloud Service Mean Response Time and Simple Cloud Service Availability. As specific, measurable characteristics of a cloud service, SLOs are the basis for defining the metrics used to evaluate and compare agreements between parties.

In Clauses 8, 9 and 10 of this document, a basic explanation of these examples is provided using a practical method based on a tabular format that is a refinement of the informative tables provided in ISO/IEC 19086-2:2018, Annex B. The tabular representation described in this document serves as templates for designing metrics. Guidance in using the metric model with these templates is provided while developing metric examples.

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Information technology — Cloud computing — Best practices for using the cloud service level agreement (SLA) metric model

1 Scope

This document provides guidance for using the ISO/IEC 19086-2 metric model, illustrated with examples

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*

ISO/IEC 19086-1, *Information technology — Cloud computing — Service level agreement (SLA) framework — Part 1: Overview and concepts*

ISO/IEC 19086-2, *Cloud computing — Service level agreement (SLA) framework — Part 2: Metric model*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 22123-1, ISO/IEC 19086-1 and, ISO/IEC 19086-2 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/

4 Symbols and abbreviated terms

CCRA	cloud computing reference architecture
CSC	cloud service customer
CSN	cloud service partner
CSP	cloud service provider
SLA	service level agreement
SLO	service level objective
SQO	service quality objective

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