



Technical Report

ISO/IEC TR 23951

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*

**Second edition
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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

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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.

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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