
**Information technology — Cloud
computing — Service level agreement
(SLA) framework —**

**Part 3:
Core conformance requirements**

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*Technologies de l'information — Informatique en nuage — Cadre de
travail de l'accord du niveau de service —
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Partie 3: Exigences de conformité essentielles*

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Contents

	Page
Foreword	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Abbreviated terms	1
5 Conformance	2
6 Relationship between the cloud service agreement and cloud SLAs	2
7 Cloud SLA Management	2
8 Role of cloud service level objectives, cloud service qualitative objectives, metrics, remedies, and exceptions in the cloud SLA	2
9 Cloud SLA components	3
9.1 General	3
9.2 Covered services component	3
9.3 Cloud SLA definitions component	3
9.4 Service monitoring component	3
9.4.1 General	3
9.4.2 Monitoring parameters	3
9.4.3 Monitoring mechanisms	3
9.5 Roles and responsibilities component	3
10 Cloud SLA content areas and their components	4
10.1 General	4
10.2 Accessibility content area	4
10.2.1 Accessibility component	4
10.2.2 Accessibility standards	4
10.2.3 Accessibility policies	4
10.3 Availability content area	4
10.3.1 Availability component	4
10.3.2 Availability	4
10.4 Cloud service performance content area	4
10.4.1 General	4
10.4.2 Cloud service response time component	4
10.4.3 Cloud service capacity component	5
10.4.4 Elasticity component	5
10.5 Protection of personally identifiable information (PII) content area	6
10.6 Information security content area	6
10.7 Termination of service content area	6
10.7.1 Termination of service component	6
10.7.2 Data retention period	6
10.7.3 Log retention period	6
10.7.4 Notification of service termination	6
10.7.5 Return of assets	6
10.8 Cloud service support content area	7
10.8.1 Cloud service support component	7
10.8.2 Support hours	7
10.8.3 Service incident support hours	7
10.8.4 Service incident notification time	7
10.8.5 Maximum first response time	7
10.8.6 Maximum incident resolution time	7
10.8.7 Support plans	7
10.8.8 Support methods	7
10.8.9 Support contacts	7

10.8.10	Service incident reporting	7
10.8.11	Service incident notification	8
10.9	Governance content area	8
10.9.1	Governance component	8
10.9.2	Regulation adherence	8
10.9.3	Standards adherence	8
10.9.4	Policy adherence	8
10.9.5	Audit schedule	8
10.10	Changes to the cloud service features and functionality content area	8
10.10.1	Changes to the cloud service features and functionality component	8
10.10.2	Minimum service change notification period	8
10.10.3	Minimum time before feature/function deprecation	9
10.10.4	Service change notification method	9
10.11	Service reliability content area	9
10.11.1	General	9
10.11.2	Service resilience/fault tolerance component	9
10.11.3	Customer data backup and restore component	10
10.11.4	Disaster recovery component	11
10.12	Data management content area	11
10.12.1	Intellectual property rights (IPR) component	11
10.12.2	Cloud service customer data component	11
10.12.3	Cloud service provider data component	11
10.12.4	Account data component	12
10.12.5	Derived data component	12
10.12.6	Data portability component	12
10.12.7	Data deletion component	12
10.12.8	Data location component	13
10.12.9	Data examination component	13
10.12.10	Law enforcement access component	14
10.13	Attestations, certifications and audits content area	14
10.13.1	General	14
10.13.2	Cloud service attestations	14
10.13.3	Cloud service certifications	14
10.13.4	Cloud service audits	14
Bibliography		15

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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. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, 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, Information technology, Subcommittee SC 38, *Cloud computing and distributed platforms*.

A list of all the parts in the ISO 19086 series can be found on the ISO website.

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Information technology — Cloud computing — Service level agreement (SLA) framework —

Part 3: Core conformance requirements

1 Scope

This document specifies the core conformance requirements for service level agreements (SLAs) for cloud services based on ISO/IEC 19086-1 and guidance on the core conformance requirements. This document is for the benefit of and use by both cloud service providers and cloud service customers.

This document does not provide a standard structure that would be used for cloud SLAs.

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*

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

<https://standards.iteh.ai/catalog/standards/sist/59f89e2e-4732-4b31-97cd-b016e4183d80/iso-iec-19086-3-2017>

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 17788 and ISO/IEC 19086-1 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>

4 Abbreviated terms

CSC	cloud service customer
CSP	cloud service provider
CSA	cloud service agreement
ICT	information and communications technology
IPR	intellectual property rights
PII	personally identifiable information
RTO	recovery time objective

RPO	recovery point objective
SLA	service level agreement
SLO	cloud service level objective
SQO	cloud service qualitative objective

5 Conformance

A cloud SLA that conforms to this document shall implement at least the following components, as described in ISO/IEC 19086-1:

- covered services;
- cloud SLA definitions.

ISO/IEC 19086-1 includes one or more cloud service level objectives (SLOs) or cloud service qualitative objectives (SQOs) for each cloud SLA component (Clause 9) or content area (Clause 10). When using a component from Clause 9 or a content area from Clause 10, a conforming cloud SLA is not required to use the SLOs or SQOs described in those components or content areas. A conforming cloud SLA is recommended to use SLOs and SQOs from ISO/IEC 19086-1, when appropriate. Regardless of whether an SLO or SQO is used, a CSP shall not redefine any term in such a way that it contradicts the terms and definitions in ISO/IEC 19086-1 or this document.

ISO/IEC 19086-2 defines a model for specifying metrics for cloud service level agreements (SLAs). Conforming cloud SLAs are encouraged to use the model in ISO/IEC 19086-2 when specifying metrics for SLOs and SQOs.

A conforming cloud SLA may use a subset of the components (Clause 9) or content areas (Clause 10) described in this document or it may include components or content areas outside the scope of this document. However, a conforming cloud SLA shall adhere to the definition of the terms, components or content areas, as stated in ISO/IEC 19086-1 and the requirements as stated in this document. Conformance for a specific component or content area means that the SLA shall adhere to all the requirements for that component or content area. Conformance to this document does not require implementation of any specific technology.

6 Relationship between the cloud service agreement and cloud SLAs

The relationship between the cloud service agreement and cloud SLAs is covered in ISO/IEC 19086-1. There are no conformance requirements for the relationship between the CSA and cloud SLAs.

7 Cloud SLA Management

Cloud SLA management is covered in ISO/IEC 19086-1. There are no conformance requirements for cloud SLA management.

8 Role of cloud service level objectives, cloud service qualitative objectives, metrics, remedies, and exceptions in the cloud SLA

The role of cloud service level objectives, cloud service qualitative objectives, metrics, remedies, and exceptions in the cloud SLA is covered in ISO/IEC 19086-1. There are no conformance requirements for role of cloud service level objectives, cloud service qualitative objectives, metrics, remedies, and exceptions in the cloud SLA.

9 Cloud SLA components

9.1 General

The cloud SLA components in this clause and the cloud SLA content areas in [Clause 10](#) define the requirements of the SLOs or SQOs that may be used within a cloud SLA.

9.2 Covered services component

The covered services component shall identify the cloud service(s) that are covered by the cloud SLA.

A given cloud SLA may cover more than one cloud service and each cloud service may have its own components, content areas, SLOs and SQOs.

9.3 Cloud SLA definitions component

The cloud SLA definitions component shall define terms that are unique to the SLA or that are particularly important to the understanding of the cloud SLA.

Cloud SLAs should use definitions from industry standards, when possible.

A conforming cloud SLA shall not redefine a term defined by ISO/IEC 19086-1, ISO/IEC 19086-3 or ISO/IEC 19086-4 in a manner that contradicts the original meaning.

9.4 Service monitoring component

9.4.1 General

A service monitoring component shall specify the monitoring mechanisms that are available to the cloud service customer.

The service monitoring component shall specify one or more SQOs for cloud service monitoring (see ISO/IEC 19086-1 for SQOs).

For each of the service monitoring SQOs chosen, the SQO shall conform to the requirements listed below for the SQO.

9.4.2 Monitoring parameters

A monitoring parameters SQO shall provide a list of the parameters for the covered services that the CSP monitors and for which it provides data to the CSC.

9.4.3 Monitoring mechanisms

A monitoring mechanisms SQO shall provide a list of monitoring mechanisms available to the CSC, which shall include a description of the monitored parameters and a description of any related terms and conditions.

9.5 Roles and responsibilities component

Roles and responsibilities component is covered in ISO/IEC 19086-1. There are no conformance requirements.

10 Cloud SLA content areas and their components

10.1 General

The cloud SLA content areas clauses define requirements for the SLOs or SQOs that may be used within a cloud SLA.

10.2 Accessibility content area

10.2.1 Accessibility component

An accessibility component shall specify one or more SQOs for accessibility (see ISO/IEC 19086-1 for SQOs).

For each of the accessibility component SQOs chosen, the SQO shall conform to the requirements listed below for the SQO.

10.2.2 Accessibility standards

An accessibility standards SQO shall provide a statement listing any accessibility related standards the CSP supports in the covered services.

10.2.3 Accessibility policies

An accessibility policies SQO shall provide a statement listing the policies and regulations for accessible ICT the CSP supports in the covered services.

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10.3 Availability content area

[ISO/IEC 19086-3:2017](https://standards.iteh.ai/catalog/standards/sist/59f89e2e-4732-4b31-97cd-b016e4183d80/iso-iec-19086-3-2017)

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10.3.1 Availability component

An availability component shall specify one or more SLOs for availability (see ISO/IEC 19086-1 for SLOs).

For each of the availability component SLOs chosen, the SLO shall conform to the requirements listed below for the SLO.

10.3.2 Availability

An availability SLO shall provide the amount or percentage of time in a given period that the cloud service is accessible and usable.

10.4 Cloud service performance content area

10.4.1 General

The cloud SLA may include components that can be used to express the performance of a cloud service.

For each of the cloud service performance content area related component SLOs chosen, the SLO shall conform to the requirements listed below for the SLO.

10.4.2 Cloud service response time component

10.4.2.1 General

A cloud service response time component shall specify one or more SLOs for cloud service response time (see ISO/IEC 19086-1 for SLOs).

For each of the cloud service response time component SLOs chosen, the SLO shall conform to the requirements listed below for the SLO.

10.4.2.2 Cloud service maximum response time observation

A cloud service maximum response time observation SLO shall specify a maximum time between a defined stimulus or input to the cloud service and a defined point in the response (see ISO/IEC 19086-2 for metrics).

10.4.2.3 Cloud service response time mean

A cloud service response time mean SLO shall specify the statistical mean over a set of cloud service response time observations (see ISO/IEC 19086-2 for a metric model).

10.4.2.4 Cloud service response time variance

A cloud service response time variance SLO shall describe how far from the mean response times are likely to be within a set of cloud service response time observations.

10.4.3 Cloud service capacity component

10.4.3.1 General

A cloud service capacity component shall specify one or more SLOs for cloud service capacity (see ISO/IEC 19086-1 for SLOs).

The cloud service capacity component shall specify the metric(s) used to state capacities, where appropriate (see ISO/IEC 19086-2 for metrics).

For each of the cloud service capacity component SLOs chosen, the SLO shall conform to the requirements listed below for the SLO.

10.4.3.2 Limit of simultaneous cloud service connections

A limit of simultaneous cloud service connections SLO shall specify the maximum number of simultaneous connections supported by the cloud service.

10.4.3.3 Limit of available cloud service resources

A limit of available cloud service resources SLO shall specify the maximum capacity of available resources.

10.4.3.4 Cloud service throughput

A cloud service throughput SLO shall specify the number of inputs or the amount of sets of inter-dependent inputs that can be processed in every unit of time by the cloud service.

10.4.3.5 Cloud service bandwidth

A cloud service bandwidth SLO shall specify the maximum amount of data that can be transferred over a period of time.

10.4.4 Elasticity component

10.4.4.1 General

An elasticity component shall specify one or more SLOs for elasticity (see ISO/IEC 19086-1 for SLOs).