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## Information technology — Cloud computing — ~~==~~

### Part 1: Vocabulary

~~Technologies de l'information — Informatique en nuage —~~

Partie 1: Vocabulaire

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### Foreword

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Field Code Changed

This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 38, *Cloud Computing and Distributed Platforms*.

The main changes are as follows:

- the definition for hybrid cloud was changed;
- definitions for CSC role, CSP role, and CSN role were added;
- the definitions for CSC, CSP, and CSN were revised to leverage CSC role, CSP role, and CSN role, respectively;
- the ISO/IEC 27000 definitions for confidentiality, integrity, and information security were removed;
- the definition of inter-cloud computing was changed;
- terms relating to multi-cloud were added;
- peer cloud service and peer cloud service provider were replaced with secondary cloud service and secondary cloud service provider, respectively; and
- terms relating to multiplicity and organization of cloud services were added into a new ~~sub-clause~~ subclause.

A list of all parts in the ISO/IEC 22123 series can be found on the ISO ~~website~~ and IEC ~~websites~~.

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# Information technology — Cloud computing —

## Part 1: Vocabulary

### 1 Scope

This document ~~provides~~defines terms ~~and definitions for vocabulary~~ used in the field of cloud computing.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

#### 3.1 General

For the purposes of this document, the following terms and definitions 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/>

#### 3.2.1 Terms related to cloud computing foundation

##### 3.2.1.1

##### cloud computing

paradigm for enabling network access to a scalable and elastic pool of shareable physical or virtual resources with self-service provisioning and administration on-demand

Note 1 to entry: Examples of resources include servers, operating systems, networks, software, applications, and storage equipment.

Note 2 to entry: Self-service provisioning refers to the provisioning of resources provided to *cloud services* ~~(3.1.2(3.2.2))~~ performed by *cloud service customers* ~~(3.3.2(3.4.2))~~ through automated means.

##### 3.2.1.2

##### cloud service

one or more capabilities offered via *cloud computing* ~~(3.1.1(3.2.1))~~ invoked using a defined interface

##### 3.2.1.3

##### cloud solution

*cloud services* ~~(3.1.2(3.2.2))~~ combined and controlled to meet *cloud service customer* ~~(3.3.2(3.4.2))~~ requirements

Note 1 to entry: A *cloud solution* can use any combination of *cloud deployment models* ~~(3.2.1(3.3.1))~~.

#### 3.3.2 Terms related to cloud deployment models

##### 3.3.2.1

##### cloud deployment model

way in which *cloud computing* ~~(3.1.1(3.2.1))~~ can be organized based on the control and sharing of physical or virtual resources

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Note 1 to entry: Examples of cloud deployment models include community cloud (3.2.1(3.3.2)), hybrid cloud (3.2.3(3.3.3)), private cloud (3.2.4(3.3.4)) and public cloud (3.2.5(3.3.5)).

### 3.32.2

#### community cloud

cloud deployment model (3.2.1(3.3.1)) where cloud services (3.1.2(3.2.2)) exclusively support and are shared by a specific collection of cloud service customers (3.3.2(3.4.2)) who have shared requirements and a relationship with one another, and where resources are controlled by at least one member of this collection

### 3.32.3

#### hybrid cloud

cloud deployment model (3.2.1(3.3.1)) that uses a private cloud (3.2.4(3.3.4)) and a public cloud (3.2.5(3.3.5)).

### ~~3.32.4~~

### 3.2.4

#### private cloud

cloud deployment model (3.2.1(3.3.1)) where cloud services (3.1.2(3.2.2)) are used exclusively by a single cloud service customer (3.3.2(3.4.2)) and resources are controlled by that cloud service customer (3.3.2(3.4.2)).

### 3.32.5

#### public cloud

cloud deployment model (3.2.1(3.3.1)) where cloud services (3.1.2(3.2.2)) are potentially available to any cloud service customer (3.3.2(3.4.2)) and resources are controlled by the cloud service provider (3.3.3(3.4.3)).

### 3.32.6

#### multi-cloud

#### multicloud

cloud deployment model (3.2.1(3.3.1)) in which a cloud service customer (3.3.2(3.4.2)) uses public clouds/services (3.1.2(3.2.2)) provided by two or more cloud service providers (3.3.3(3.4.3)).

Note 1 to entry: The cloud service customer (3.3.2(3.4.2)) is responsible for integration and management of these cloud services (3.1.2(3.2.2)) to form a cloud solution (3.1.3(3.2.3)).

### 3.32.7

#### cloud service federation

two or more cloud service providers (3.3.3(3.4.3)) bound together by an agreed set of policies, processes and trust in order to provide cloud services (3.1.2(3.2.2)).

### 3.32.8

#### federated cloud

cloud deployment model (3.2.1(3.3.1)) in which the cloud services (3.1.2(3.2.2)) are provided by members of a cloud service federation (3.2.7(3.3.7)).

### ~~3.3.2.9~~

### 3.3.2.9

#### hybrid multi-cloud

cloud deployment model (3.2.1(3.3.1)) in which a cloud service customer (3.3.2(3.4.2)) uses cloud services (3.1.2(3.2.2)) from a hybridcloud (3.2.3(3.3.3)) and a multi-cloud (3.2.6(3.3.6)).



**3.3.62.10****inter-cloud  
intercloud**

*cloud deployment model* (3.2.1(3.3.1)) in which a *cloud service provider* (3.3.3(3.4.3)) offers a *cloud service* (3.1.2(3.2.2)) by using one or more *cloud services* (3.1.2(3.2.2)) provide by other *cloud service providers* (3.3.3(3.4.3)).

**3.43.3 Terms related to cloud computing roles and activities****3.43.1****party**

natural person, legal person or a group of either, whether or not incorporated, that can assume one or more *roles* (3.3.10(3.4.10)).

**3.43.2****cloud service customer****CSC**

*party* (3.3.1(3.4.1)) that is acting in a *cloud service customer role* (3.3.14(3.4.14)).

**3.43.3****cloud service provider****CSP**

*party* (3.3.1(3.4.1)) that is acting in a *cloud service provider role* (3.3.15(3.4.15)).

**3.3.4****3.4.4****cloud service user****CSU**

natural person, or entity acting on their behalf, associated with a *cloud service customer* (3.3.2(3.4.2)) that uses *cloud services* (3.1.2(3.2.2)).

Note 1 to entry: Examples of such entities include *devices* (3.13.4(3.14.4)) and applications.

**3.43.5****cloud service partner****CSN**

*party* (3.3.1(3.4.1)) that is acting in a *cloud service partner role* (3.3.16(3.4.16)).

**3.43.6****cloud auditor**

*cloud service partner* (3.3.5(3.4.5)) with the responsibility to conduct an *audit* (3.13.10(3.14.10)) of the provision and use of *cloud services* (3.1.2(3.2.2)).

**3.43.7****cloud service broker**

*cloud service partner* (3.3.5(3.4.5)) that negotiates relationships between *cloud service customers* (3.3.2(3.4.2)) and *cloud service providers* (3.3.3(3.4.3)).

**3.43.8****activity**

specified pursuit or set of tasks

**3.43.9****functional component**

functional building block needed to engage in an *activity* (3.3.8(3.4.8)), backed by an implementation

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### 3.43.10

#### role

set of activities (3.3.8(3.4.9)) that serves a common purpose

### 3.43.11

#### sub-role

subset of the activities (3.3.8(3.4.9)) of a given role (3.3.10(3.4.10))

### 3.43.12

#### device platform cloud service

cloud service (3.1.2(3.2.2)) offered by the device platform provider (3.13.13(3.14.13)) to support the device platform (3.13.5(3.14.5))

Note 1 to entry: An application marketplace (3.13.6(3.14.6)) can be an example of device platform (3.13.5(3.14.5)) cloud service (3.1.2(3.2.2)).

### 3.43.13

#### cloud service developer

cloud service partner (3.3.5(3.4.5)) with the responsibility for designing, developing, testing and maintaining the implementation of a cloud service (3.1.2(3.2.2))

### 3.43.14

#### cloud service customer role

##### CSC role

set of activities (3.3.8(3.4.9)) for the purpose of using cloud services (3.1.2(3.2.2))

### 3.43.15

#### cloud service provider role

##### CSP role

set of activities (3.3.8(3.4.9)) that make cloud services (3.1.2(3.2.2)) available

### 3.43.16

#### cloud service partner role

##### CSN role

set of activities (3.3.8(3.4.8)) that support, or are auxiliary to, either the cloud service provider role (3.3.15(3.4.15)) or the cloud service customer role (3.3.14(3.4.14)), or both

## 3.5.3.4 Terms related to key cloud computing characteristics

### 3.5.4.1

#### measured service

metered delivery of cloud services (3.1.2(3.2.2)) such that usage can be monitored, controlled, reported and billed

### 3.5.4.2

#### tenant

one or more cloud service users (3.3.4(3.4.4)) sharing access to a set of physical and virtual resources

### 3.5.4.3

#### multi-tenancy

allocation of physical or virtual resources such that multiple tenants (3.4.2(3.5.2)) and their computations and data are isolated from and inaccessible to one another

### 3.5.4.4

#### on-demand self-service

feature where a cloud service customer (3.3.2(3.4.2)) can provision computing capabilities, as needed, automatically or with minimal interaction with the cloud service provider (3.3.3(3.4.3))

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**3.54.5****resource pooling**

aggregation of a *cloud service provider's* (3.3.3(3.4.3)) physical or virtual resources to serve one or more *cloud service customers* (3.3.2(3.4.2)).

**3.63.5 Terms related to cloud capabilities types and cloud service categories****3.65.1****cloud capabilities type**

classification of the functionality provided by a *cloud service* (3.1.2(3.2.2)) to the *cloud service customer* (3.3.2(3.4.2)), based on resources used

Note 1 to entry: The *cloud capabilities types* are *application capabilities type* (3.5.2(3.6.2)), *infrastructure capabilities type* (3.5.3(3.6.3)) and *platform capabilities type* (3.5.4(3.6.4)).

**3.65.2****application capabilities type**

*cloud capabilities type* (3.5.1(3.6.1)) in which the *cloud service customer* (3.3.2(3.4.2)) can use the *cloud service provider's* (3.3.3(3.4.3)) applications

**3.65.3****infrastructure capabilities type**

*cloud capabilities type* (3.5.1(3.6.1)) in which the *cloud service customer* (3.3.2(3.4.2)) can provision and use processing, storage or networking resources

**3.65.4****platform capabilities type**

*cloud capabilities type* (3.5.1(3.6.1)) in which the *cloud service customer* (3.3.2(3.4.2)) can deploy, manage and run customer-created or customer-acquired applications using one or more programming languages and one or more execution environments supported by the *cloud service provider* (3.3.3(3.4.3)).

**3.5.5****3.6.5****cloud service category**

group of *cloud services* (3.1.2(3.2.2)) that possess some common set of qualities

Note 1 to entry: A *cloud service category* can include capabilities from one or more *cloud capabilities types* (3.5.1(3.6.1)).

**3.65.6****communications as a service****CaaS**

*cloud service category* (3.5.5(3.6.5)) in which the capability provided to the *cloud service customer* (3.3.2(3.4.2)) is real time interaction and collaboration

Note 1 to entry: *CaaS* can provide both *application capabilities type* (3.5.2(3.6.2)) and *platform capabilities type* (3.5.4(3.6.4)).

**3.65.7****compute as a service****CompaaS**

*cloud service category* (3.5.5(3.6.5)) in which the capabilities provided to the *cloud service customer* (3.3.2(3.4.2)) are the provision and use of processing resources needed to deploy and run software

Note 1 to entry: To run some software, capabilities other than processing resources are potentially needed.